Cost and Management

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Editorial Comment . . .

Proposed Merger of C.P.A.'s and C.A.'s in Ontario

MUCH PROMINENCE has been given in the press to the proposed merger of the Ontario Institute of Chartered Accountants and the Ontario Association of Certified Public Accountants. This attention is not unusual in controversial matters nor is it unusual to find that basic motives and ultimate goals are sometimes obscured in the fog created by the various factions.

As an organization dedicated to the advancement of the accounting profession as it relates to the industrial field, the Society of Industrial and Cost Accountants has more than a passing interest in this matter. It is vitally interested, of course, in anything that affects the accounting profession as a whole.

Several years ago the Board of Directors of the Society approved a policy supporting the concept that the accounting profession covers two major fields of activity, namely, that of public accounting and auditing and that of industrial accounting which embraces all types of business organization. More particularly, this might be interpreted as a distinction between external accounting and auditing and, on the other hand, internal accounting for management control.

In 1954, the Society of Industrial and Cost Accountants and the Canadian Institute of Chartered Accountants, as the only two accounting organizations with incorporated bodies in all ten provinces, together sponsored a conference of university teachers of accounting to explore areas of mutual interest. The object of the conference was to define, if possible, a basic core of accounting instruction that would serve as a common ground for specialized training in either public accounting and auditing or industrial accounting.

While it cannot be said that the conference resolved anything conclusively, it is felt that this concept of accounting education is still sound and that it would be more readily attained if there were a greater degree of consolidation of accounting bodies within the profession. In any event, there is a strong case for the view that the needs of the profession can be met best by offering separate, specialized courses in the advanced stages for those who wish to enter the field of public accounting and those who wish to follow a career in the industrial or administrative sector. To

attempt to prepare candidates for both fields in one course is to sacrifice some degree of specialized training in one or both areas, or to impose upon the student a program of six or seven years' study. Neither of these alternatives is in the interest of the profession.

For its part, S.I.C.A. continues to strengthen and expand its role as the only accounting body in Canada whose aims and objects are related exclusively to the field of industrial accounting embracing, as it does, all areas of administrative accounting in manufacturing and non-manufacturing concerns.

To many, it is true, the term "industrial accounting" carries the connotation of manufacturing costs and nothing more. This, of course, is a great misconception: first, because a thorough knowledge of basic accounting is essential to the proper understanding of cost accounting and its function in the business; secondly, because in its broad sense, cost accounting is the heart of the accounting function as it relates to management control. For example, it is inconceivable that such tools as budgets and budgetary control, planning and control can be developed and administered without some knowledge of cost accounting and a proper understanding of its application. This applies as much to service and distribution as it does to manufacturing.

The need for this balance between financial and cost accounting becomes evident when one examines the curriculum leading to the R.I.A. qualification. The new curriculum is composed as follows:

General Accounting	two full courses and one half-course	38 lessons or 125 lecture hours
Management Accounting	one half-course	12 lessons or 24 lecture hours
Cost Accounting	two full courses	50 lessons or 100 lecture hours
Law	one full course	18 lessons or 40 lecture hours
Industrial Organization and Management	one full course	19 lessons or 40 lecture hours
Managerial Statistics	one half-course	10 lessons or 24 lecture hours
Report Writing	one half-course	10 lessons or 24 lecture hours

Moreover, 40 per cent of the advanced course in cost accounting is devoted to budgetary control, profit planning, breakeven analysis and cost control and reporting.

After extensive research studies through the Educational Foundation, the Educational Committee of the Society is satisfied that the curriculum has been designed to meet adequately the needs of the administrative accountant and to provide a sound base for further specialization. The fact that there are now 5,500 students registered for the R.I.A. courses indicates that the training provided by S.I.C.A. is not only meeting those needs but is being recognized as of a quality and standard best suited to them.

Since the aims and objectives of S.I.C.A. are directed exclusively to the industrial field, the merger of two organizations serving the public accounting and auditing sector does not have special significance except as it may influence the advancement of the profession as a whole.

It is suggested that the needs of the profession may best be served if each accounting body directed its resources to the training and advancement of the members in its own field, but on a co-operative basis so that each may complement the other.

WRITING REPORTS TO MANAGEMENT

by Milton B. Basson,
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Price Waterhouse & Company,
New York, N.Y.

About 80% of the information management needs and can use is contained in 20% or less of the printed matter that floods the executive desk. Are you guilty of any of the common faults the author enumerates here? In his rules for good reporting, he stresses that reports should be clear, colorful and precise and should be channelled where they will do the most good.

THIS ARTICLE is about a subject that involves the most extraordinary, the most incredible, the most magnificent of man's inventions—language. Anything else that man has built or created—airplanes, electronic computers, great works of art, great cities, great developments in science, in government, in philosophy—is dwarfed by the invention of language—in fact it's likely that almost all of them would have been impossible without language. It's been said that language is the most significant characteristic of mankind—that without it we could not form communities, work together in an organized way or pass on knowledge and inventions from generation to generation.

Now language has for its purpose—communication. And by communication the dictionary says we mean interchange of thoughts and opinions by conference or "other means". We are concerned with effective methods of communication and reporting within an organization. We've all had frequent contact with these methods —they include personal contact, conference programs, instruction manuals, newsletters, financial reports, bulletin boards, grapevines, and so on. But what we are looking for is the key to *effective* communication. Should it be written or oral— or a combination of both?

The written technique has the advantages of carrying greater weight of authority, of permitting checking before release to ensure accuracy, of permanence, of uniformity to all recipients—and of probably getting a higher rate of retention. The oral is more personal, more flexible, and more apt to result in a two-way exchange of ideas.

Of course, communication needn't use words at all. Consider for example, an orchestra conductor. But for this purpose, we are going to assume that written or oral communication is necessary to good reporting. The conductor's baton is not a typical tool in our professional work. So we're going to try to communicate and report by using words. And here is where we get bogged in an absolute morass of impediments to good communication and good reporting. Words are wonderful, but they're treacherous; if we don't use and treat them properly, they'll destroy what we're trying to do.

Mr. Basson has been with Price Waterhouse & Company since 1942. He is a graduate of Columbia University and a Certified Public Accountant in the state of New York. He is a member of the American Institute of Certified Public Accountants, New York State Society of Certified Public Accountants, National Association of Accountants, American Management Association, and the Institute of Newspaper Controllers and Financial Speakers. Mr. Basson has appeared as speaker before numerous professional and industrial organizations and has contributed articles to professional publications.

USE PRECISE COLORFUL ENGLISH!

In using words, first and most important—"Define your terms". We've all been present at discussions and arguments that went on and on, to no apparent purpose, because people were arguing about different things to which they had attached the same label.

Next—distinguish between fact and inference. State only the fact—avoid stating the inference you draw from it, as though it, too, were a fact.

Third—and this is one area in which we all sin to some extent—avoid jargon and gobbledygook. For instance, this sign appeared in a hotel:

> *"In order to substantiate our desire to accommodate our guests, we would appreciate your cooperation to anticipate your credit requirements before departure."*

Or—in English—Please tell us in advance if you want to cash cheques.

This doesn't mean at all though, that we have to stick to gray, colorless language. By all means use unusual words—even incongruous words—where they fit the circumstances and help to get your idea across. In *Penrod* for instance, Booth Tarkington speaks of a particularly loathsome medicine that was inflicted on a boy, by an over-zealous mother, as something which was virtually without color or odor and therefore, "unlike the chivalrous rattlesnake", gave no warning of what it was about to do. I first read that phrase when I was about ten years old, but it's remained fresh in memory ever since. That's good communication.

In any industrial operation, of course, communication is a vital and constant process. The moment that any organization goes beyond the one-man stage, the necessity for conveying information comes into existence. And this conveying of information, this communicating, is done by reports.

Sometimes it is pretty hard to say what is and what is not a report. As we'll use the term, reporting is the accumulation of data according to a meaningful pattern, and the communication of this information to those who must use it in time and in a way which is useful to them. There are some key ideas in this definition. First the data must be assembled in a meaningful manner. Second, the information must be communicated to those who can use it, and third, they must get it quickly enough to match their needs.

TREAT THE USER'S VIEWPOINT AS PARAMOUNT

A primary and unchallengeable characteristic of a good reporting system is that it must develop and present information which is useful for control purposes by the man who gets the report. The reporting process must be designed from the standpoint of the user, not from the standpoint of the individual or department responsible for its application. This is a vital point and one which it is easy to overlook, since the accounting technician, in common with all technicians, tends to become so enamoured of the sheer technique of doing his work, and of the concept that his product should be technically perfect in the eyes of the other technicians, that he tends to overlook the viewpoint of the real user.

So, the report has to be designed to meet the needs of the man who is going to use it. In order to be sure that this is accomplished, we should discuss the form and content of the report with the man for whom it is to be prepared while the report is in the design stage. This is essential if the report is actually to be useful as a control

tool. This may seem so self-evident that it doesn't need to be mentioned—but our own recurring experience proves that it does. As an example, is the case in which a group of accounting officials and procedures men in a large manufacturing company were planning the design and installation of an inventory control system, including the preparation of reports that would be prepared under the new system. No consideration had been given to conferring with manufacturing personnel on their requirements, or to reporting cost variances at successive stages of production. As a result of some strenuous exercise in oral communication it was agreed to get out of the ivory tower into the plant.

RELATE THE REPORT TO ORGANIZATION

An effective report must take into account and reflect the individual or department's responsibility for results.

Now in order to have reports that will help a man control the things he is responsible for, there must be a clear and explicit definition of areas of responsibility and lines of authority—that is, there must be a sound organization plan that is announced to, understood by, and accepted by, the organization personnel. A man has to know what his control responsibility is before we can give him a satisfactory reporting tool that will help him to do his job. If responsibilities are not defined *and accepted,* or where they overlap or conflict, it is almost impossible to appraise performance or to report on a reliable basis.

An individual's position in the organization helps to determine the information he needs to do his work. It also determines the scope of his authority to make decisions and to take action. Therefore, in designing reports we have to observe the lines of authority and responsibility set out in the company's organization plan in reporting information that indicates the need for management action.

If you have ever tried to work out or interpret reports in a company where responsibilities were not defined or, perhaps worse, in a company which was full of joint or conflicting responsibilities, you have almost certainly run into extreme difficulty, and in the end developed a series of reports and proposed responsibilities which were not generally accepted by the officials involved. You will note reference is made to "which were not accepted by" because, in most such instances, the reports are received but not used.

The areas of responsibility selected for appraisal should be such that a man exercises a reasonable degree of control over the effectiveness of the unit being reported upon. If the unit is too small and the unit head is so large that a number of individuals, particularly when they are on the same level of management, can have an important influence on the effectiveness of the unit, you will encounter or create the situation where "everybody's business is nobody's business".

REFLECT THE EXTENT TO WHICH CONTROL CAN BE EXERCISED

If the organization plan is sound, and if the scope of a man's job and his information requirements have been agreed upon, we can prepare a useful report to indicate how he has performed in the areas for which he is responsible. This generally means separating expenditures between controllable and non-controllable items. Both should be included in the report—but they should be clearly distinguished. Controllable items such as payroll, materials, power, are those over which a supervisor exercises direct control in carrying out his activities in accordance with planned operations.

The noncontrollable items such as property taxes and allocated administrative overhead are expenditures over which the supervisor has little or no control. They should be shown in order to present the full picture of what has happened, but they should be set out separately so as to avoid the possibly demoralizing effect of a man's feeling that he is being charged with a lot of costs that he can't do anything about.

Another important idea involved in good responsibility accounting and reporting is that the sins of one department should not be capable of being passed on to a second department in such a way as to affect the apparent performance of the second department. Thus, in determining the amount which Department X should pay for steam, for example, we must apply the principle that a fair price is that which represents a fair measure of good production performance. In the case of steam, for example, a fair amount would represent a charge for the quantity of steam actually used by Department X, but the price at which this quantity was purchased from the steam department would be the price which represented good performance on the part of the steam department. If excessive production costs of the steam department would have increased the charge by $500, it would have made Department X's results look bad for a reason which was beyond its control.

COMPARE ACTUAL RESULTS WITH GOOD PERFORMANCE

A very important characteristic of a good reporting system, certainly one of the key characteristics, is that the ultimate reader or user in the line organization should not be forced to determine what constitutes good performance if this can be reasonably indicated to him as the result of a clerical or evaluation process performed by a staff employee.

Obviously, as operations expand and the area over which control must be exercised increases, it becomes more and more difficult, in fact impossible, for executives to oversee, check and follow up every detail of every happening. It just can't be done and, in fact, it shouldn't be done. To try is to invite being bogged down in masses of detail so that the forest is lost sight of for the trees, and neither the time nor the mental energy is available for doing purposeful, creative thinking at an executive level. The information furnished to executives for their use as control tools must, therefore, distinguish between those things that are progressing satisfactorily, and according to plan, and which consequently need relatively little attention, and those things in which performance is unsatisfactory and in which management's direct attention is required. This is the essence of management by exception.

An executive has a limited amount of time to spend in studying and acting upon reports. The extent to which this time is eaten into, by the necessity of having to do the clerical work of making comparisons, represents a direct and very significant reduction of the amount of time available for executive action. Thus, whenever it is possible, a good reporting system should produce a control report containing information which serves as a measure of good performance.

The detailed information that is reported on costs and expenses of a department, for example, should be shown in such a way that it indicates whether performance has been good, or unsatisfactory. This means comparing it with a reasonable target or yardstick—in other words—budgetary control. The report should indicate how the actual results compare with a planned course of action related to the actual level

of operations. This means flexible budgeting—setting targets for varying levels of possible activity, and then comparing actual results with those targets. That is, as a matter of fairness and just common sense, judging performance by standards that apply to the actual conditions in which the operations were performed.

Performance must be judged in terms of the real activities of the department. Bear in mind that a major objective of the reporting and control system is to develop and sustain the philosophy that the head of Department X is running a business. The standards of good performance in effect must therefore represent the price which the business as a whole is willing to pay to have this department. Factors which may influence the company as a whole—such as the failure to achieve the desired or planned volume—should not, therefore, be permitted to affect adversely an appraisal of the effectiveness of the department's operations. And thus, the measures of good performance that are used are intended to be indicators of good performance in terms of the department's own ability to achieve this good performance.

Now what is good performance for the department may not be good performance for the company as a whole, and thus it becomes essential in measuring the performance of the department to measure it on its own terms. This implies that we must make some sort of an allowance to the department for the factors which limit its ability to perform because of conditions which are beyond the department's control. The reverse of this is equally true. Wherever it is possible to do so, we should not give one department an allowance without making this allowance, or at least the need for this allowance, the responsibility of some other department.

For example, recognition could be given to the fact that the department had a lower volume of work to process than was anticipated and, thus, was unable to absorb expenses of a relatively fixed nature which were incurred to provide a capacity in line with the company's plans. At first glance, one might say that this allowance was no one's responsibility. On the other hand, the allowance could quite conceivably be made the responsibility of the sales department for its failure to promote the product actively, to encourage customers to take deliveries in off season, to change its price strategy, to accept marginal lines of business, or to embark on a program of building up inventory in slack sales periods. This may not be the case, but making this the responsibility of a department such as sales, or possibly production control, forces a consideration of the problem and an attempt to do something about it which is, after all, a basic objective of control information.

An allowance might be made because the work of Department X was so scheduled by the production control department that Department X was forced to operate more hours than should have been required to produce the volume actually manufactured under a more efficient scheduling process. From personal experience, I can say that introducing the concept that this allowance is the responsibility or at least a measure of the efficiency of the production control department, can bring about very rapid, concrete results.

USE PHYSICAL DATA AND EXPLAIN THEM

An additional characteristic of a good reporting system is that it should use physical data when the results can be more clearly or more quickly portrayed or understood in this way. There seems to be an unfortunate reluctance on the part of

financial departments to express results in terms of dollars. This reluctance can be understood only in terms either of difference in professional background or a lack of appreciation of the value of each to the other. It is quite clear that physical data often are more useful, more direct and more quickly available. When that is the case, they should be used. On the other hand, there are many situations, especially where complicated interrelationships are involved, where physical data simply cannot express these relationships. And thus, the best reporting systems and the best control reports make use of financial data when they are most useful and physical data when they best serve the purpose.

PROVIDE EXPLANATIONS AND INTERPRETATIONS

It is a virtual impossibility, however, to express an appraisal of results simply in terms of tables of data. Comments are almost always essential—to make clear, to supplement and to conserve the time of executives in achieving an understanding of the causes of good or bad performance. Comments on labor efficiency might indicate, for example, that the principal causes of an unfavorable result were high trainee costs, idle time while waiting for materials, idle time while waiting for machines, and extra overtime—information which might not otherwise be discernable from the reports. When there are a number of causes of good and bad performance which can be predicted in advance, the accounting system itself is often set up in such a way that the information required for the comments is reported as a regular routine. Then that information which is significant in the particular period is used in appraising the department's actions and in preparing explanatory comments.

BE TIMELY

An important requirement of a good control report is timeliness. This varies with the recipient of the report, just as content does. To a group foreman, "timely" may mean within a day, whereas to a senior executive, a summary of a month's activity, in which certain of the data are already several weeks old, may be adequate. But in such case the man who is directly in a position to correct what is wrong should have gotten his information when it was fresh, when he could do something about it. To this end I would sacrifice pin-point accuracy for speed. Provide for internal flash reporting, if necessary, even if some threads are left loose; they can be tied down later.

DON'T OVER-REPORT

An important point to remember in designing reports and reporting systems is that the same information should not be reported to everyone. This principle applies not only to different departments, but to different levels of the same department. It's fairly self-evident, for example, that different data are needed by the sales manager, the manufacturing manager, and the engineering manager. But even in the same department, different levels of authority need different control information. For example, in an engineering operation, detailed reports showing the individual items of cost, compared with preliminary estimates, would be prepared for each project and submitted to the various project engineers in charge of the projects. Summary reports would be prepared, of projects, for the supervising engineers, Finally, highly condensed summaries would be prepared for the managing engineer, in charge of the entire department. Reports should carry the minimum of information—

especially in the upper management levels—consistent with the recipient's need. Begin the report with a summary that gives the gist of the report without requiring that it be read in its entirety. The summary can serve as an index to the main text.

In designing reports, we should plan to emphasize the unusual or "bulge" items, and to lay less stress on the functions or operations that are proceeding according to plan. This technique enables each man to operate by use of the exception principle as it applies to the functions he is responsible for. He can review information which is only as detailed as is needed for his level of authority and concentrate his attention and inquiry on the items or areas that are out of line. To help the recipient of the report, in this respect, I think it's a good idea to omit the budgeted amounts from the report. Their principal purpose is to be compared with actual so as to compute the difference. Simply show the actual amount and the variance from budget, and don't show all the variances. Generally, the principal reason for showing all of them is to have a means for proving the arithmetic of the report. Show only the important variances, which merit attention.

As a matter of fact, it's altogether likely that a great deal too much information is reported to the upper executives in many companies. The old 80-20 rule pretty certainly applies to the splendid jungle of printed digits that finds its way to an executive's desk each month. That is, 80% of what information he needs and can use is contained in 20%, or less, of the mass of print with which he's flooded. At an AMA conference about two years ago, Mr. E. A. Carlson, Controller of Johnson & Johnson, said:

> "The assumption that management needed (or could use) as much information as could be provided seems incredibly naive today . . . I don't believe there are many successful companies of any size whose top managers rely on monthly financial reports. Top managers get information every day on the most important aspects of their business . . . Just what can management do with the usual income statement and balance sheet? . . . They involve a great deal of calculation and preparation, yet in most cases the results are not surprising; at any rate, they shouldn't be! . . . We feel that, in order to get action (which, I assume, is what we are trying to accomplish through reports), it is important . . . to issue reports that have a bearing on a specific situation in which it is possible to take specific action . . . The whole field of special reporting is a challenge to our imagination in the constant effort to make reports more useful."

I bow in Mr. Carlson's direction. We can all do our companies a real service by concentrating on minimizing as much as possible of the recurring, routine, and unnecessary reporting, and trying more to produce special purpose reports to spark action where it's needed. Let's not only manage by exception—let's report by exception also.

PRESENT THE REPORTS EFFECTIVELY

The manner in which reports are transmitted to the users often has a great deal to do with their effectiveness. It seems quite clear that companies cannot afford to have all reports delivered to their recipients by hand and to have the reports individually explained so that reasonable certainty exists that they are understood and will be used. On the other hand, it would be an equally extreme practice merely to transmit the reports by mail or internal messenger service without any

knowledge as to whether they were understood by and suited the purposes of the person who received them. Some sort of a compromise is desirable. This might involve periodical discussions with a group of recipients as to the basic method of preparation of the report, its interpretation and the way in which it could profitably be used. This should also be followed up by periodic personal contacts to indicate a willingness, perhaps even a desire, on the part of the financial department to assist the recipient in any way possible in understanding the specific items raised by specific reports or even to go over with him once again the more basic information about the report which was covered at the general meeting.

Some reports, however, are so important that their reading should not be left to chance or to the discretion of the individual. In those cases, it would seem desirable to set up a meeting, perhaps a regularly scheduled meeting, at which the data would be gone over and interpreted to the individual or the group. One of the greatest causes of failure in many reporting systems lies not in the quality of the reports but rather in the extent to which their preparers exert themselves to make sure that the reports are understood and used. And since this is not a one-way street, the evaluators will themselves gain from a better understanding of the underlying conditions and will be able to alter the form and content of the reports in a manner which will make them more useful in the future.

CONCLUSION

So to summarize, these seem to be the principal characteristics of the form and content of reports to management and of the process which produces them:

1. Use precise English that defines what you're talking about.
2. Use colorful and unusual language, where it is appropriate, to catch and hold the interest of the man who gets the report. Remember, the report doesn't exist for its own sake; it is intended to tell someone something he ought to know, so as to get him to do something he ought to do.
3. Treat the user's viewpoint as paramount.
4. Relate the report to organization since it must reflect the authority and the responsibility of different individuals, departments, etc.
5. Reflect the extent to which control can be exercised.
6. Compare actual results with measures of good performance. To gain acceptance as a control device, the standards of performance must be a fair measure of ability to perform and must be accepted as such.
7. Make allowances to one individual or one department if they are caused by some sort of failure on the part of a second department.
8. Use physical data and explain them.
9. Provide explanations and interpretations so that line executives do not have to spend time on clerical work, which can be devoted to taking corrective action.
10. Be timely.
11. Don't over-report.
12. Use the most effective form and manner of presentation to gain understanding, acceptance and action, based on the reporting process.

If you do these things, you should be well on the way to providing your management with reports that warrant the time, effort and cost that went into them.

The Editor's Choice

FINANCIAL REPORTING

by J. Coughlan, Advanced Management, Nov. 1960.

In this rather brief article, the author makes some general observations: "A good system of financial reporting . . . should relate performance to responsibility." "It is important that the reporting system make meaningful comparisons between inputs and outputs, between costs and revenues, between effort and achievement." The author then illustrates some distortions (with which most industrial accountants will be familiar) that can occur in profit figures through the use of absorption costing. He states: "Perhaps the prime service of misleading figures in the manufacturing enterprise is the tortuous and involved process known as cost accounting." This statement will likely be challenged by many cost accountants who will argue that misleading profit statements have existed for a long time and that one of the prime reasons for advancement in more meaningful financial reporting is the contribution of cost accounting.

QUESTIONS IN COMPANY-OPERATED TRANSPORT

By K. U. Flood, Harvard Business Review, Jan.-Feb. 1961.

In the interest of economy and customer service, companies must review periodically their transport system and assess its worth. This article points up the important factors to consider in choosing between hiring transport services or doing the job within the company. The article also discusses type of equipment and what method of finance to use if the company is to operate its own transport system. The major considerations are economy, including the invisible or hidden costs, and the implications of the decision in the light of changing methods of transport and changing methods of doing business.

MATING TIME FOR THE RAILROADS

By G. Burck, Fortune, Jan. 1961.

This article begins, "These are momentous and auspicious days for the railroads. At last they are beginning to rationalize their wasteful, anachronistic structure." This statement was not made about railroads in Canada, but about U.S. companies which operate in a country with a large population and a great bulk of goods and services. "Four large carriers have consolidated during the past year, two dozen more are in various stages of merging, and practically every road of any account is entertaining the idea." There is food for thought here for all Canadians. It would be interesting to know what discussions are taking place between our two large roads.

DOING BUSINESS IN FOREIGN COUNTRIES

By H. E. Crate, The Canadian Chartered Accountant, Jan. 1961.

This article introduces some of the organizational and tax considerations of doing business abroad. The author concludes by emphasizing that "the management decision to commence foreign operations should be based on the long-term expectations as to the profitability of the enterprise and the political and economic stability and development of the country rather than on the vagaries of taxation policy." There are some good examples of tax savings by changing the method of operating, and a brief discussion of the tax laws of some foreign countries.

A STUDY OF DIRECT COSTING*

by Richard K. Costello,
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Throughout the development of cost accounting, management has been trying to cope with fixed costs—those which do not change, regardless of the changes in volume. This paper is the result of a study of direct costing, a method which seems to have great possibilities. In it, direct costing is applied to a rather simple process industry. While the material and exhibits may appear to over-simplify the application of direct costing, it may be helpful to those who would like to investigate the feasibility of direct costing for their company.

THE PRINCIPAL feature of direct costing is the division of costs into fixed and variable categories. There are no semi-variable costs. The fixed and variable components of semi-variable costs can be segregated by using a separate account for each component. Borderline costs can be classified as either fixed or variable according to their general characteristics. The latter can be reduced to an amount that will not affect the reliability of the direct costing method.

Fixed costs can be described by their relationship to volume, but as to what is included will differ from company to company. Fixed costs are costs to which management has committed itself; costs which are not changed by short-run fluctuations in volume; costs which will change, not by productive activity, but only by management decisions. They may be fixed because the amounts are established relative to time by management; hence, management policies and decisions must be analyzed in determining cost classifications. Some costs may be classified as fixed for a budget period because they are not controllable within that period. An existing fixed cost will continue until a decision is made to eliminate it. Existing fixed costs are sunk costs and have no bearing on the relative profit contributions of specific products or markets. Fixed costs have to be controlled and there may be variations in fixed costs. In direct costing, fixed costs are period costs.

Variable costs are those which increase or decrease in direct proportion to volume. A variable cost in direct costing is capable of being identified with a product or a production activity to the extent that the cost will be incurred for each additional unit of product produced and "saved" for each unit of product not produced. They may be called direct product costs. Direct costs can be thought of in terms of cash needed or "out-of-pocket expense" for each additional unit of product produced. The variability of some costs with volume is automatic. It will be necessary to allocate some variable costs to products—costs which vary with total volume or in such a manner as not to be identifiable with a particular product.

*Material taken from thesis submitted by author to Golden Gate College, San Francisco, California, in partial fulfillment of the requirements for the Degree of Master of Business Administration.

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It is basic to assume that the activity to which direct costing is being applied represents a going concern operating within a practical volume range. The size of company profits will depend upon the margins by which the sales revenue from all products exceeds those costs which are incremental to the sunk costs. A new capital expenditure should affect product costs only to the extent that it affects the variable cost of a product or products. The decision to make a capital expenditure then should be based on the return in investment—measured by savings in variable cost—and the payout period, not on the total net effect of the capital expenditure on the total cost of the product or products.

There is more than one method that can be used to determine the variability of cost elements. This "job" seems to deter many from proceeding with a study of direct costs for their particular company or industry. It is possible to make a rather simple analysis of cost experience. Assume that the costs in a processing industry break down like this:

Raw materials	25.0%
Containers and packaging materials	40.0
Utilities	1.5
Salaries, wages and payroll costs	20.0
Maintenance materials and services	3.0
Operating supplies	1.0
Fixed charges	9.0
Miscellaneous	.5
	100.0%

Making a cursory study, the raw materials, containers and packaging materials

X Y Z COMPANY

Exhibit 1

No. 2 Mixing Cost Centre Statement for the month of July 1959

Description	Unit Cost		Total Dollars		
	Actual	Standard	Actual	Standard	Variance
PRODUCTION (UNITS)			50,000		
RAW MATERIALS	$	$	$	$	$
A	v 4.0000	4.0000	200,000	200,000	—
B	v .5050	.5000	25,250	25,000	(250)
C	v .5000	.5000	25,000	25,000	—
TOTAL	5.0050	5.0000	250,250	250,000	(250)
LABOR					
Operation No. 1	v .1850	.1800	9,250	9,000	(250)
Operation No. 2	v .0050	.0050	250	250	—
Operation No. 3	v .0005	—	25	—	(25)
TOTAL	.1905	.1850	9,525	9,250	(275)
BURDEN					
Maintenance Labor	.0090	.0100	450	500	50
Maintenance supplies and services	v .0010	.0020	50	100	50
Indirect payroll costs (10%)	v .0200	.0195	998	975	(23)
Supplies	v .0060	.0060	300	300	—
TOTAL	.0360	.0375	1,798	1,875	77
TOTAL COST CENTRE	v 5.2315	5.2225	261,573	261,125	(448)

would be variable and the fixed charges fixed. These three items account for 74% of the total cost. With a little further study we could probably determine that about 13% of the salaries, wages and payroll costs, 1% of the utilities and 2% of the maintenance supplies and services are definitely either fixed or variable. This makes 90% of the total costs segregated as fixed and variable. The remaining 10%, consisting of segments of labor, salaries, payroll costs, maintenance supplies and services, utilities and miscellaneous can be resolved into fixed and variable components with reasonable accuracy. A fair estimate of the variable portion of total manufacturing cost in this study is 80 to 85%.

PRODUCTION COSTING USING DIRECT COSTING

Only variable costs would be shown on the standard product cost sheets and on cost centre statements. The latter would be prepared for production cost centres only. Exhibit 1 is a cost centre statement on a direct cost basis which can be compared to Exhibit 2 which is the same cost centre on an absorption cost basis. On the absorption cost centre statement each cost element is classified as either all fixed or all variable. Variable costs per unit are multiplied by the actual volume to arrive at the total standard item cost on both statements (raw material A: 50,000 x $4.0000 = $200,000). On the absorption cost statement, the fixed standard costs remain the

EXHIBIT 2

X Y Z COMPANY

No. 2 Mixing Cost Centre Statement for the month of July 1959

Description	Unit Cost		Total Dollars		
	Actual	Standard	Actual	Standard	Variance
PRODUCTION (UNITS)			50,000	75,000	
RAW MATERIALS	$	$	$	$	
A	v 4.0000	4.0000	200,000	200,000	—
B	v .5050	.5000	25,250	25,000	(250)
C	v .5000	.5000	25,000	25,000	—
TOTAL	5.0050	5.0000	250,250	250,000	(250)
LABOR					
Operation No. 1	v .2400	.2000	12,000	10,000	(2,000)
Operation No. 2	v .0060	.0050	300	250	(50)
Operation No. 3	v .0020	.0200	100	1,000	900
Indirect	f		1,000	1,000	—
TOTAL			13,400	12,250	(1,150)
BURDEN					
Maintenance Labor	f		750	1,000	250
Maintenance supplies and services	f		800	1,000	200
Supplies	f		600	500	(100)
Indirect payroll costs (10%)	v .0248	.0225	1,240	1,125	(115)
Indirect payroll costs (10%)	f		175	200	25)
TOTAL			3,565	3,825	260
FIXED CHARGES					
General Works			2,000	2,000	—
Depreciation			5,500	5,500	—
Insurance			850	900	50
Taxes			500	500	—
TOTAL			8,850	8,900	50
TOTAL COST	5.5213	5.4995	276,065	274,975	(1,990)
VOLUME VARIANCE		(.0840)		(4,200)	(4,200)
TOTAL MANUFACTURING COST	5.5213	5.4155	276,065	270,775	(5,290)

same amount in the standard cost column regardless of the volume. On the absorption cost centre statement, the difference between the sum of the fixed and variable elements of cost ($274,975), and the amount of actual volume times the total standard cost per unit for the cost centre operation (50,000 x $5.4155=$270,775) is entered as volume variance ($4,200): or, the fixed cost of $0.168 per unit at the normal volume ($12,600÷75,000) multiplied by the 25,000 difference in volume makes a volume variance of $4,200. In direct costing there is no allocation of fixed expenses, as they are accumulated separately. No normal or standard volume has to be established and used on the statements. No volume variance or over- and under-absorbed overhead have to be carried. There will be no end-of-the-year adjustments of over- or under-absorbed overhead as all fixed costs will be charged to each month on a one-twelfth basis. Some variable costs, such as utilities, may have to be allocated to production through clearing accounts. The same flow of variable product costs can be maintained as used for standard absorption costing in a processing industry.

PRODUCT COSTS ON A DIRECT COST BASIS

A product cost on the direct cost basis would include only elements of cost which vary directly with volume. Exhibit 3 shows two products, each on an absorption cost basis and on a direct cost basis.

Observe that product A is the more profitable under direct costing but the least profitable under absorption costing. If management had a choice of deciding which product to emphasize to achieve a more profitable sales mix, product B would be chosen on the basis of product costs under absorption costing. This would not give the desired results.

Observe that product A shows a loss under absorption costing but shows a profit margin under direct costing. Using absorption costing, management may consider dropping product A with the false impression of improving profits.

A supplemental presentation of fixed costs can be prepared as it should be useful to management (Exhibit 4). It can be used for return-on-investment data. It is

PRODUCT COST COMPARISON

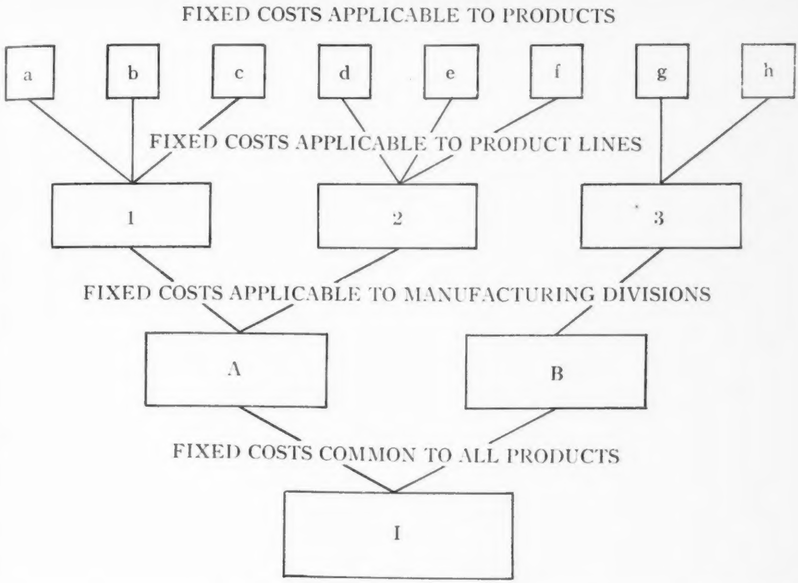
EXHIBIT 3

	ABSORPTION COSTING		DIRECT COSTING	
	PRODUCT A	PRODUCT B	PRODUCT A	PRODUCT B
Raw materials (v)	$ .30	$ .30	$ .30	$ .30
Packaging materials (v)	1.00	1.25	1.00	1.25
Direct labor (v)	.20	.25	.20	.25
Indirect labor (v)	.04	.05	.04	.05
Supplies, etc. (v)	.03	.03	.03	.03
TOTAL VARIABLE COST	1.57	1.88	1.57	1.88
Fixed cost—direct and allocated	1.00	.60	—	—
Total manufacturing cost	2.57	2.48	1.57	1.88
Marketing sales margin	2.50	2.60	2.50	2.60
Profit margin	(.07)	.12	.93	.72

Comparison of product costs on the basis of direct costing and absorption costing.

SCHEDULE OF FIXED PLANT COSTS

EXHIBIT 4



MARKET COST COMPARISON

EXHIBIT 5

	ABSORPTION COSTING		DIRECT COSTING	
	MARKET A	MARKET B	MARKET A	MARKET B
Margin—Gross Revenue less Manufacturing cost (a)	$ .50	$ .50	$ .50	$ .50
Variable Marketing Costs	.10	.20	.10	.20
Marketing Sales Margin	.40	.30	.40	.30
Fixed Marketing Costs (b)	.45	.25	—	—
Profit Margin	(.05)	.05	.40	.30

(a) Identical under both costing methods to emphasize the effect of marketing costs only.
(b) This marketing cost includes direct and allocated fixed marketing cost.

Comparison of market costs on the basis of direct costing and absorption costing.

possible to improve net income by the alteration of, or adjustment to, these "blocks" of fixed costs.

NON-MANUFACTURING COSTING USING DIRECT COSTING

Non-manufacturing costs can also be segregated into fixed and variable components. Since the variable costs in this category will be costs which vary directly

with sales volume, they could be called variable marketing costs. Exhibit 5 shows two markets for one product on a direct cost basis and on an absorption cost basis.

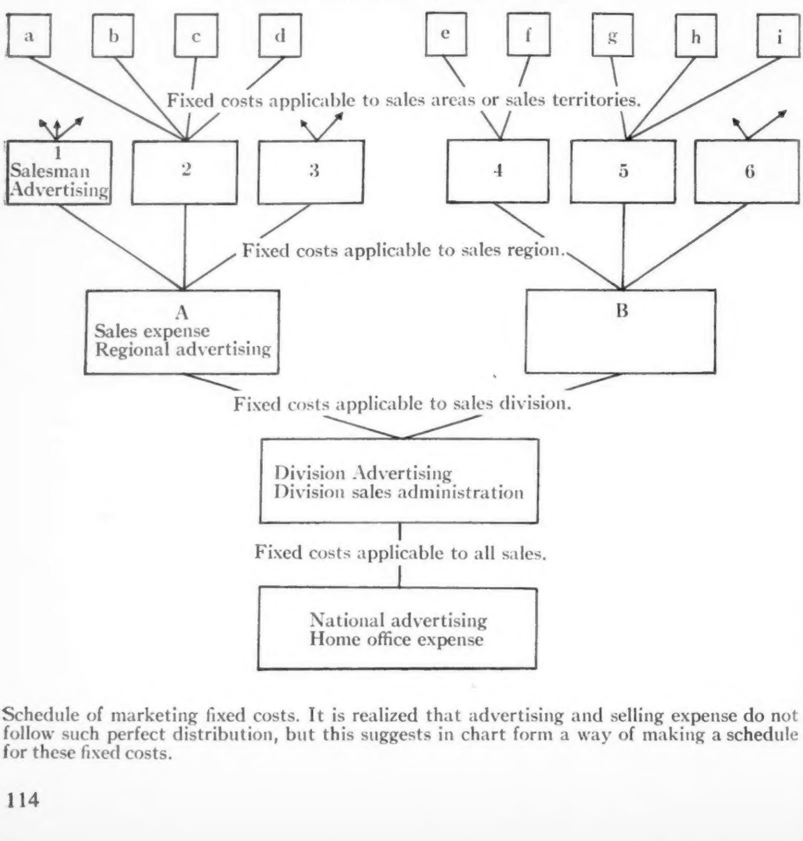
Observe that market A is the more profitable under direct costing but the least profitable under absorption costing. If management had to choose between the two markets on the basis of absorption costing, market B would be chosen. This would not give the company the greater profit.

Observe that market A shows a loss under absorption costing but shows a profit under direct costing. Under absorption costing, management may decide to pull out of market A with the false impression of eliminating a "loss" market.

A supplemental schedule can be prepared showing "blocks" of fixed marketing costs (Exhibit 6). These "blocks" of fixed marketing costs are much more susceptible to alteration than are most of the "blocks" of fixed manufacturing costs, and the closer to the market, the more susceptible. The sum total of certain types of "blocks", advertising for instance, may be fixed, but the placing of this fixed cost is flexible.

SCHEDULE OF FIXED MARKETING COSTS

EXHIBIT 6



Schedule of marketing fixed costs. It is realized that advertising and selling expense do not follow such perfect distribution, but this suggests in chart form a way of making a schedule for these fixed costs.

For example, at the beginning of a year management may allocate a $10,000 "block" out of a fixed advertising budget of $1,000,000 to be spent in one market. During the year a second market with a greater marketing sales margin shows greater potential sales than it had at the beginning of the year. Management takes $3,000 of the unspent portion of the $10,000 "block" and spends it in the second market. If this $3,000 produces the same sales volume in the second market as it would have in the first, it will result in a larger company profit. Even though these "blocks" are assigned to markets on the basis of anticipated or past volume, the cost elements are not incremental with short-run volume fluctuations.

INCOME STATEMENTS USING DIRECT COSTING

Exhibit 7 compares an income statement for three months on a direct cost basis with the same three months on an absorption cost basis. Each month represents a different relationship between production volume and sales volume. In March the production volume is greater than the sales volume. In October the production volume is lower than the sales volume—the latter being the same as the March sales volume. In July the sales volume and the production volume are the same. On the direct cost basis, gross sales are reduced by variable marketing costs to arrive at a marketing sales margin; variable manufacturing costs are subtracted from the marketing sales margin to arrive at a marginal income contribution; and fixed costs

COMPARATIVE INCOME STATEMENT

EXHIBIT 7

Direct Costing—Absorption Costing

	MARCH	JULY	OCTOBER
PRODUCTION VOLUME (UNITS) (Normal Volume 75,000)	75,000	90,000	45,000
SALES VOLUME (UNITS)	60,000	90,000	60,000
ABSORPTION COSTING	$	$	$
NET SALES	1,794,000	2,691,000	1,794,000
COST OF SALES			
Manufacturing	1,260,000	1,890,000	1,260,000
Variances (Volume)	—	(30,000)	60,000
Total Cost of Sales	1,260,000	1,850,000	1,320,000
GROSS PROFIT	534,000	831,000	474,000
COMMERCIAL EXPENSES			
Selling	180,000	240,000	180,000
Advertising	200,000	200,000	200,000
Administrative	56,000	59,000	56,000
Total Commercial Expense	436,000	499,000	436,000
OPERATING PROFIT	$ 98,000	$ 332,000	$ 38,000
DIRECT COSTING			
NET SALES	1,794,000	2,691,000	1,794,000
Less: VARIABLE MARKETING COSTS	126,000	189,000	126,000
MARKETING SALES MARGIN	1,668,000	2,502,000	1,668,000
COST OF SALES			
Manufacturing	1,140,000	1,710,000	1,140,000
Variances	—	—	—
Total Cost of Sales	1,140,000	1,710,000	1,140,000
MARGINAL INCOME CONTRIBUTION	528,000	792,000	528,000
FIXED COSTS:			
Manufacturing	150,000	150,000	150,000
Selling	60,000	60,000	60,000
Advertising	200,000	200,000	200,000
Administrative	50,000	50,000	50,000
Total Fixed Costs	460,000	460,000	460,000
OPERATING PROFIT	$ 68,000	$ 332,000	$ 68,000

are subtracted from the marginal income contribution to arrive at the operating profit. The basic difference, of course, is the treatment of fixed costs as period costs, all shown in one place on the statement, and the inclusion of variable costs only in the cost of sales and marketing costs. On the direct cost income statement in Exhibit 7, the net profit varies with the sales volume, but not in the absorption cost statement. Operating profit is $68,000 for both March and October under direct costing with the same sales volume in both months; but is $98,000 in March and $38,000 in October under absorption costing with the same sales volume in both months. Since the production and sales volume are the same in July under both methods, the profit is the same under both methods The breakeven point can be readily computed from the statement on the direct cost basis.

PROFIT MARGINS

Management should not lose sight of the relationship of marginal income contributions to fixed costs and profits. It is all too easy to assume that as long as a unit of product has a marginal income contribution, it should be made and sold. This may be true, but it is necessary to reach that volume level which contributes enough margin to cover fixed costs and leaves an adequate profit. Once the amount of fixed costs is known, management can add a desirable profit to it and arrive at the total marginal income contribution needed. With this as a base, management can then set a target marginal income contribution for all products. Higher margins may be required on some products than on others.

With absorption costing, whenever unit costs are used for production costs or marketing costs, management should keep in mind that these costs are based on a certain volume and whenever that volume changes, the unit costs change. In fact, a change in volume may not only affect the unit cost of a product under study but also the unit cost of some or all of the other products. It is apparent that more exact product cost comparisons and more exact product profit contribution comparisons can be achieved through the use of direct costing.

For further reading

DIRECT WORDS ABOUT DIRECT COSTING, by J. R. Harrowell, D. R. Rickard and R. L. Gourlay (in three parts), *The Chartered Accountant in Australia, Sept., Oct., Nov. 1960.*

MANAGEMENT'S USE OF DIRECT COSTING, by J. D. Goforth, *Cost and Management, Nov. 1960.*

CURRENT APPLICATION OF DIRECT COSTING, Digest of N.A.A. Research Bulletin #37, *N.A.A. Bulletin, Jan. 1961.*

DIRECT COSTING—WILL GENERAL ACCEPTANCE FOLLOW MANAGEMENT ACCEPTANCE? by R. E. Davis, *N.A.A. Bulletin, Sept. 1960.*

The Economic SCENE .

by John A. Sawyer,
School of Business,
University of Toronto.

SINCE 1956, Canada's payments on current account to non-residents have exceeded her receipts by over one billion dollars a year. This gap between payments and receipts has been financed by the sale abroad of Canadian debt and equity securities. The former gives rise to a future burden of interest payments, while the latter results in foreign ownership of Canadian industry as well as dividend payments abroad. What is the cause of this imbalance and what can be done to correct it?

Merchandise imports into Canada increased by 80% from 1950 to 1956 and have remained relatively constant since then. Is this high level of imports the result of a large-scale substitution of foreign goods for domestic goods? The following table suggests that this is not the case. Indeed, the proportion of Canada's gross national

Merchandise Imports and Exports as Per Cent of Gross National Product, 1950-59

	1950-52	1953-55	1956-57	1958-59
Imports of consumer goods as per cent of personal expenditure on consumer goods	11.4	11.8	12.4	12.5
Imports of investment goods as per cent of total capital expenditure	20.7	22.0	22.0	19.3
Imports of fuels, lubricants, and industrial materials as per cent of GNP	8.0	6.4	6.7	5.8
Total merchandise imports as per cent of GNP	17.5	16.4	17.7	15.8
Total merchandise exports as per cent of GNP	18.1	16.1	15.1	14.9

Source: Bank of Canada *Statistical Summary* and Dominion Bureau of Statistics, *National Accounts, Income and Expenditure.*

product spent on imported goods remained steady during most of the period and declined in recent years. Imported goods, however, captured a slightly larger share of the market for consumer goods, causing difficulties for some domestic producers. If the total market for consumer goods had been growing more rapidly, the domestic producers might not have suffered a decline in total sales, although they would not have shared in the growth of the market. The decline in the rate of growth of the economy in recent years has, however, accentuated their problems. Imports of fuels, lubricants, and industrial materials, on the other hand, have decreased in importance, while imports of investment goods have varied from one period to another, reflecting the alternating periods of general expansion and contraction in the Canadian economy.

The proportion of Canada's national product sold in export markets has declined steadily during the period. It has been this failure of exports to grow at the same rate as total product that has resulted in the persistent and large deficit in the balance of trade from 1955 to 1959. Preliminary figures for 1960 indicate that recent increases in exports to Europe, Australia, and Japan, together with a further decrease in the proportion of total income spent on imported goods have come close to closing this gap in trade. Because of the increasing net payments of interest and dividends abroad, however, it will be necessary for exports to increase by almost 15% to completely close the gap between current receipts and payments, assuming other international transactions, such as tourist expenditures, are in balance. In fact, they have not balanced, with the result that the deficit on current account in 1960 will again be close to one billion dollars.

In 1950, Canada adopted a freely fluctuating exchange rate, partly because a free market rate would automatically tend to correct an imbalance between receipts and payments by adjusting the external value of the Canadian dollar so that the quantity demanded at the market rate equalled the amount available at that rate. Demand for the Canadian dollar results from foreigners wishing to buy Canadian goods, services, or securities. Similarly, Canadian dollars are offered for sale when Canadians wish to buy foreign goods, services, or securities. Instead of the deficit on current account resulting in the Canadian dollar being devalued, the strong foreign demand for Canadian securities, particularly in the forest, mineral, petroleum and gas industries, had the effect that the total demand for Canadian dollars by foreigners far exceeded the supply that would have been forthcoming if the Canadian and United States dollars had remained at par. The Canadian dollar therefore went to a premium which stimulated Canadian demand for foreign goods and services and reduced the profitability of export industries—exactly the opposite effect that was necessary to alleviate the deficit on merchandise trade.

The recent action of the Minister of Finance in withdrawing taxation incentives to foreign investment has removed, at least temporarily, some of the demand for Canadian securities and has helped the exchange rate move in the right direction to correct the trade imbalance. Some slight reduction in interest rates has also reduced the attractiveness of investment in Canada and the pressure on Canadians to borrow abroad. The long-run profitability of investment in Canada still remains high, however, and unless restrictions are placed on foreign investment it can be expected to continue at a relatively high level.

To some extent, therefore, capital transactions will continue to play an initiating role. As long as this inflow of foreign capital is kept to moderate levels and as long as it contributes to an adequate rate of growth in the Canadian economy, it may not be undesirable. To reduce it would require a change in the expenditure pattern of Canadians, controls over economic activity, and possibly a lower rate of growth. Are Canadians willing to pay this price? This question must be answered before a foreign trade policy can be developed. A precise statement of the costs is also required before a rational policy can emerge. It should be remembered too that it has been the failure of export markets to expand, and not a change in the spending habits of Canadians, which is the other major factor in Canada's international payments problem.

MANAGEMENT—A WEAPON FOR SURVIVAL by **Dr. Harold B. Maynard**
Proceedings Second Top Management Seminar on Executive Practices and Methods 1959

We cannot ignore foreign competition from either friends or foes. We cannot throw up our hands and attribute our inability to remain competitive to low foreign wage rates. Managements' chief job is to solve problems, and this is one of the problems to be solved. It is by no means hopeless. Far as we have come along the road to higher productivity, we have really only begun the journey. Other countries are going to face demands for increased wage rates as they get more and more prosperous. Indeed, this is already happening.

Yes! There are many benefits to be derived from higher productivity. It can be a tremendous aid in solving many of our current problems. It can prevent future problems from arising. But all this can happen only if we manage the results of higher productivity well, and therein lies a problem which management up to now has not handled very successfully. Indeed, management has handled it so ineptly—or better, has not handled it at all—that it is becoming one of the most serious threats to our survival that we face at the present time.

In most cases when we achieve higher productivity we do it by saving labor. By mechanization, automation, better planning, improved methods, wage incentives, and the like, we find ways of increasing the productivity of a group of workers. We make it possible for one man to do the work formerly performed by two, and thus we save labor. This is highly desirable from many viewpoints. It makes it possible to reduce costs, increase sales, obtain greater production from a given set of facilities, and improve profits. In the long run, experience has shown that total employment also increases.

As long as unions show greater interest than management in the personal problems of people brought on by our industrial way of life, they will have the support of large numbers of these people. These people may not like to be taken off their jobs by a strike they had little or nothing to do with calling. They may even join the growing number of the general public who are beginning to wonder if the so-called "right to strike" is a sound doctrine in a highly integrated and interdependent society where a handful of strikers can idle thousands of others and affect adversely the entire economy.

But these people also have the same instinct for survival that everyone else has, and they will support anything or anybody that they feel will help them with their own personal survival problem. Education on the economic facts of life may be very persuasive to those whose security is not threatened, but it is not the answer to gaining acceptance for productivity-increasing activities. The unions are more realistic. "We agree," they say, "that increased productivity is good in the long run. But we are interested in the short-run problems which it creates."

So we have management fighting the long-range battle for survival against foreign competition, Communist economic encroachment, and the more immediate competitive pressures which they face at home, and unions fighting the short-range battle to keep their people at work right now. And this is not good. It has a weakening effect on our entire economy. Strong as we are, we cannot afford too many glass strikes, steel strikes, or transportation strikes. We cannot afford featherbedding either. So what are we in management to do?

A PROCESS COST SYSTEM FOR A MEDIUM-SIZED FIRM*

CONCLUSION

By R. W. Hiller,
Chief Accountant,
Hostess Food Products,
Hespeler, Ontario.

In this article, the last of two parts, the author concludes his description of a cost system for a potato chip manufacturer, suitable for many medium-sized process industries. In the February issue, general and cost accounting procedures and the system of material control were described. This instalment covers labor and overhead control, the control of selling and administrative expenses, budgeting and reports.

LABOR AND ITS CONTROL

OVER THE PAST several years, great strides have been made in the development of automatic machinery for the processing and packing of potato chips. This has had the effect of increasing overhead costs and decreasing labor costs. Chips Inc. uses semi-automatic machinery, the direct labor on which constitutes approximately 8% of the cost of sales.

This relatively minor percentage is strongly overshadowed by the high material cost of the product. However, proper control of this cost element is still vitally necessary. To provide this control, a system of estimated standards derived from operational time studies is used to measure labor efficiencies.

Direct labor is purchased on a straight time basis. Incentive payment schemes are not considered necessary as the employees are tied down to machines regulated by supervisory "machine operators". Uncontrollable factors such as potato gravity, variety and chip size at times determine the speeds at which the machines can be operated. It is these "machine operators" on whom the onus is finally placed to account satisfactorily for labor efficiency fluctuations.

The estimated standards are reviewed annually and are only adjusted when a change of methods or operations takes place.

Factory labor costs are charged to two direct labor accounts and to nine overhead accounts. Direct labor accounts are "Direct Labor—Processing" and "Direct Labor—Packaging". Labor is charged to overhead accounts on a functional basis where possible in order to facilitate the placing of responsibility and the distribution of the overhead to the productive cost centres.

The overhead accounts to which labor is charged are:

- Indirect Labor (Plant cleaning and watchmen)
- Factory Supervision Salaries
- Labor—Receiving and Stores
- Building Repairs and Maintenance
- Machinery and Equipment Repairs and Maintenance
- Canteen

*Condensation of a Thesis submitted for R.I.A. qualification.

Robert W. Hiller has been with Hostess Food Products since 1957 and is presently Chief Accountant. He was previously with Dominion Rubber Company Limited. He began his R.I.A. studies in 1955 and graduated last year. A lifelong resident of the Kitchener-Galt area, Mr. Hiller is an active member of the Grand River Chapter of S.I.C.A. and serves on the Attendance Committee.

Labor—Inspection
Labor—Potato Storage
Laboratory

PAYROLL PROCEDURES

Employees are required to punch attendance cards for hours worked each day. These are turned in weekly to the payroll department and serve as a basis for wages paid. The payroll department totals these cards and returns them to the production superintendent for auditing and verification.

The verified cards are then returned to the payroll department for writing up the payroll. A one-write system (pay cheque, payroll journal and earnings record card prepared simultaneously) is in use which has been found satisfactory for the straight time system of wage payment in use.

The prepared cheques and the supporting attendance cards are given to the works manager who signs the cheques and verifies the correctness of the totals as they appear on the payroll journal.

The payroll journal sheets are used as the voucher by the controller for transferring funds to the payroll bank account.

PAYROLL DISTRIBUTION

Accounting distribution of the payroll is made from the payroll journal sheets adjusted by departmental transfers.

Employees normally perform the same operations on a steady basis. Whenever an employee changes jobs or is transferred temporarily to another line of work, he is required to complete a labor transfer slip which is initialled by the foreman of the charged department. These slips are attached to the attendance cards and are priced for the number of hours shown.

The payroll journal sheets show sub-totals for the labor normally charged to each of the eleven accounts to which labor is spread. These totals are entered weekly on a "Labor Transfer Spread Sheet". Transfers are then entered on this sheet for departmental transfers as shown by the labor transfer slips in order to arrive at correct labor hours and dollars of expense to charge to each account. This sheet forms the basis for the entry in the payroll register charging the various labor accounts.

"Machine Record Cards" are kept for each processing and packaging machine. These cards show direct labor hours charged against each machine and production turned out by each machine. The machine crew efficiency report is prepared from this information as well as summary other information such as idle time for each machine. The hours and production as reported by these cards are balanced by the cost department against the attendance cards and summary production data.

The payroll department prepares summaries of actual labor data as shown in Exhibit 3 for the cost department. This report shows weekly data for labor hours and monthly data for labor hours, average rates and total expenses by labor accounts.

DIRECT LABOR VARIANCE ANALYSIS

The cost department enters standard data on this report and computes variances for the direct labor accounts.

Standard hours for each 100 pounds of chips processed or each 100 pounds of each size packed are determined from the operational time studies. Standard rates

Exhibit 3

LABOR BREAKDOWN

MONTH—December

A/C No.	Labor Division	Hours—W/E. 12/5	12/12	12/19	12/26	1/2	—	Tot. Hrs.	Tot. $	Av. Rate	No. Empl.
5.00	Direct Labor—Processing	180	220	230	225	145	—	1,000	1,400	1.40	5
5.10	Direct Labor—Packaging	1,100	1,340	1,360	1,350	850	—	6,000	6,600	1.10	34
6.10	Indirect Labor	150	190	197	155	152	—	844	993	1.18	4
6.11	Factory Supervision Salaries	128	160	160	128	128	—	704	1,056	1.50	4
6.12	Labor—Receiving and Stores	80	100	100	80	80	—	440	528	1.20	3
6.13	Labor—Inspection	260	310	323	250	265	—	1,408	1,549	1.10	8
6.14	Labor—Potato Storage	130	150	165	125	134	—	704	845	1.20	4
6.60	Building Repairs and Maintenance	32	40	40	32	32	—	176	246	1.40	1
6.61	Mach. and Equip. Repairs and Maint.	32	40	44	32	32	—	180	291	1.62	1
6.72	Canteen	16	20	20	16	16	—	88	88	1.00	1
6.80	Laboratory	32	40	40	32	32	—	176	229	1.30	1
	Total	2,140	2,610	2,679	2,425	1,866	—	11,720	13,825	1.18	66

A/C No.	Labor Division	Actual $	Std. $	Eff. Var.	Rate Var.	Tot. Var.
5.00	Direct Labor—Processing	1,400	1,472	(54)	(18)	(72)
5.10	Direct Labor—Packaging	6,600	6,785	115	(300)	(185)
			Budget $	Extra Allow.	Tot. Budg.	Budg. Var.
6.10	Indirect Labor	993	858	65	923	70
6.11	Factory Supervision Salaries	1,056	1,100	—	1,100	(44)
6.12	Labor—Receiving and Stores	528	553	—	553	(25)
6.13	Labor—Inspection	1,549	1,220	280	1,500	49
6.14	Labor—Potato Storage	845	764	—	764	81
6.60	Building Repairs and Maintenance	246	262	—	262	(16)
6.61	Mach. and Equip. Repairs and Maintenance	291	300	—	300	(9)
6.72	Canteen	88	85	—	85	3
6.80	Laboratory	229	229	—	229	—
	Total	13,825	13,628	345	13,973	(148)

are set at the top rates on a straight time basis paid for each operation.

The cost department extends the pounds of production for each size by the standard hour and dollar amounts for each size to arrive at the total standard allowances. From the total standard allowances is determined (by division) an average standard hourly rate.

The direct labor variances for the packaging department are developed below using the following data:

	ACTUAL	STANDARD
Hours	6,000	5,900
Dollars	$6,600.00	$6,785.00
Average Rate	$1.10	$1.15
Total Production	200,000 lbs.	200,000 lbs.
Average Hours per 100 lbs. packed	3.00	2.95

PACKAGING LABOR RATE VARIANCE: 6,000 ($1.10 – $1.15) = ($300.00)
PACKAGING LABOR EFFICIENCY VARIANCE: $1.15 (6,000 – 5,900) = $115.00

NET VARIATION — FAVORABLE ($185.00)

The average hours per 100 pounds packed figure is a summary figure which appears on a condensed report going to top management.

In order to make the labor variances as meaningful as possible, it is attempted to charge only that labor which varies proportionally with production to direct labor. For instance, inspection labor is necessary on a steady basis and could be considered as direct labor. However, amount of inspection varies with potato quality and not with production, so in order not to cloud the direct labor costs, this item is segregated and charged to overhead.

The direct labor efficiency variance is broken down and tied in with the individual machine efficiencies developed from the "Machine Record Cards" in order to place responsibility and to provide a basis on which to take corrective action.

Labor is thus reported and controlled from top management down to each machine.

MANUFACTURING OVERHEAD CONTROL

Factory overhead expenses are charged to some 21 sub accounts under a Manufacturing Expenses Control account. The accounts were designed to provide ease of control and analysis for the following three objectives:

(1) Control by nature of expense
(2) Control by function of expense
(3) Control and cost by pack size of product.

From the labor breakdown (Exhibit 3), it can be seen that labor is charged to nine overhead accounts, five of which are natural and four of which are functional. Where possible, all expenses are charged by nature of activity rather than by nature of expense. If the charges made in this manner would cause the account to become complicated to analyze, they are charged instead to natural accounts and then later grouped statistically to provide cost by activity. This charging by activity facilitates the placing of responsibility to the various individuals for the incurrence of the overhead service controllable expenses.

ESTIMATING OVERHEAD EXPENSES

Overhead expenses are budgeted annually by nature of expense and then are grouped to conform with the chart of accounts. The overhead budget is set by the

cost department in conjunction with the department heads who will ultimately be responsible for the incurrence of expenses. This has been found necessary to obtain the support and co-operation of the responsible individuals.

The actual estimating consists principally of historical analysis tempered with known changes which will apply to the period being budgeted. Final approval to the budgeted amounts is given by a committee composed of the controller, the works manager and the cost accountant before the expense is incorporated into the master budget.

The expense is further resolved into its fixed variable components by the cost accountant and the head of the department to be charged with the expense. This is necessary in order to develop profit/volume relationships and controllable and non-controllable overhead variances.

Expenses are budgeted on volume expected in the ensuing period in order to lend realism to the results and comparisons obtained. It is felt that long-term normal expenses are of interest to top management only. This type of expense is reported to management only as the subject of a special periodic report.

DISTRIBUTION TO COST CENTRES

Overhead expenses are grouped into five cost centres for control purposes; two productive and three service. Since only a single product is being produced, the cost per finished unit would not change if the overhead expenses were not charged to various centres. This is advisable, however, in order to control the expenses incurred by each department and to provide for the possibility of additional products where this would become a factor.

The productive and service centres in use are:

Productive	(1)	Processing
	(2)	Packaging
Service	(3)	General Factory
	(4)	Potato Storage
	(5)	Receiving and Stores

Actual expenses are distributed to the productive and service centres by account. For the natural and some of the functional accounts, the distribution bases used are the same as those used for the distribution of the annual budgeted amounts. For the expenses incurred under the account "Machinery and Equipment Repairs and Maintenance" and account "Building Repairs and Maintenance", work orders are prepared showing expenses for each job worked on during the month. These work orders are analyzed and distributed on an actual basis to the various centres.

Reference should be made to Exhibit 4, which shows the actual expenses for the month, their basis of distribution in the various centres and the re-distribution of the service centre totals to the productive centres.

ANAYLSIS OF VARIANCES

Allowable expenses for any level of activity can be ascertained quickly from flexible budgets which are prepared at the beginning of the accounting period. This permits the cost accountant to compare quickly and realistically the expenses allowed by account and the expenses actually incurred.

Certain of the expense accounts, notably Building Repairs and Maintenance and Machinery and Equipment Repairs and Maintenance, are subject to large variances

CHIPS INC.

Exhibit 4

OVERHEAD DISTRIBUTION

A C No.	Dist. Basis	Processing	Packaging	Gen. Fact.	Potato Storage	Receiving and Stores	Total Expense
		$	$	$	$	$	$
6.10	(2) (7)	258.18	258.18	89.37	129.09	258.18	993.00
6.11	(7)	528.00	528.00	—	—	—	1,056.00
6.12	(7)	—	—	—	—	528.00	528.00
6.13	(7)	810.00	738.80	—	—	—	1,548.80
6.14	(7)	—	—	—	—	844.80	844.80
6.20	(4)	31.68	84.96	10.08	10.08	7.20	144.00
6.21	(4)	73.00	195.76	23.23	23.23	16.58	331.80
6.22	(4)	15.21	40.78	4.84	4.84	3.45	69.12
6.23	(3)	34.68	124.44	24.48	12.24	8.16	204.00
6.30	(2)	19.50	19.50	6.75	9.75	19.50	75.00
6.40	(2)	7.80	7.80	2.70	3.90	7.80	30.00
6.50	(6)	128.00	144.00	16.00	16.00	16.00	320.00
6.51	(2)	46.80	46.80	16.20	23.40	46.80	180.00
6.60	(7)	102.96	102.96	35.64	51.48	102.96	396.00
6.61	(7)	294.60	162.03	34.37	—	—	491.00
6.70	(3)	6.03	21.64	4.26	2.13	1.42	35.48
6.71	(3)	6.29	22.57	4.44	2.22	1.48	37.00
6.72	(3)	3.74	13.42	2.64	1.32	.88	22.00
6.80	(6)	138.68	53.80	—	76.52	—	269.00
6.90	(2)	78.00	78.00	27.00	39.00	78.00	300.00
6.91	(5)	375.00	206.25	43.75	—	—	625.00
6.00	Total	2,958.15	2,849.69	345.75	1,250.00	1,096.41	8,500.00
Pot. Stor. Tsfr.		1,250.00			(1,250.00)		
Rec.-Stor. Tsfr.			1,096.41			(1,096.41)	
Gen. Fact. Tsfr.		48.40	297.35	(345.75)			
Total		4,256.55	4,243.45	—	—	—	8,500.00
Less: Pot. Stor.		1,250.00					1,250.00
Net Total		3,006.55	4,243.45	—	—	—	7,250.00
Budget on standard hours		3,120.00	4,380.00				7,500.00
Controllable O'Head Var.		(113.45)	(136.55)				(250.00)
Standard Rate standard hrs.		3,114.00	4,130.00				7,244.00
Non-Controllable O'Head Var.		6.00	250.00				256.00
Net Variance		(107.45)	113.45				6.00
Add: Potato Storage variance charged to materials							(70.00)
Total Net Overhead Variation							(64.00)

Note: General Factory total charged to productive centres on the basis of direct labor hours.

because of their specialized nature which rarely ties in with the production activity. The job work orders for these functions are budgeted for at the beginning of each month and "Extra Budgetary Allowances" are computed and added if necessary to the allowance as shown by the annual flexible budget. This has the effect of providing more realistic comparisons between budgeted and actual amounts which, in turn, makes the department heads more conscious of the controllable nature of the costs which they have incurred.

Schedules of controllable expenses with variances by cost centre are issued monthly to the various department heads so that they may be constantly aware of the importance of overhead costs. Management is issued a report similar to Exhibit 4 showing budgeted amounts with explanations of variances in addition to the actual amounts shown. The total controllable and non-controllable variances

CHIPS INC.

EXHIBIT 5

DISTRIBUTION EXPENSES BY TERRITORIES

Month—December

A/C No.	DESCRIPTION	TERRITORY (1)		(2)		(3)		(4)		TOTAL	
	Dollar Sales	85,500.00		23,000.00		18,000.00		23,500.00		150,000.00	
	Per Cent of Total	57.00		15.33		12.00		15.67		100.00	
	Pound Sales	115000		31000		24000		32000		202000	
	Case Sales	39000		10300		8200		10800		68300	
	Avge. Selling Price per Pound	.743		.742		.750		.734		.743	
	EXPENSE	$	PER LB.	$	PER LB.	$	PER LB.	$	PER LB.	$	PER LB.
7.70	Shipping Wages	510.00	.004	130.00	.004	100.00	.004	160.00	.005	900.00	.004
7.71	Shipping Supplies	50.00	.001	30.00	.001	76.00	.003	94.00	.003	250.00	.001
7.72	Freight & Express	480.00	.004	456.00	.015	723.00	.030	738.00	.023	2,397.00	.012
7.80	Truckers' Wages	1,125.00	.010	310.00	.010	315.00	.013	—	—	1,750.00	.009
7.81	Truckers' Exp.	110.00	.001	43.00	.001	27.00	.001	—	—	180.00	.001
7.82	Gasoline and Oil	623.00	.005	380.00	.012	247.00	.010	—	—	1,250.00	.006
7.83	Truck Repairs & Expenses	325.00	.003	160.00	.005	58.00	.003	—	—	543.00	.003
7.90	Depreciation—Trucks & Autos	360.00	.003	180.00	.006	60.00	.003	—	—	600.00	.003
	TOTAL	3,583.00	.031	1,689.00	.054	1,606.00	.067	992.00	.031	7,870.00	.039

	(1)	(2)	(3)	(4)	TOTAL
Net Selling Price Per Pound	.712	.688	.683	.703	.704
Per Cent of Average S. P. Per Lb.	101.1%	97.7%	97.0%	99.9%	—
Previous Month's % of Average	101.3%	97.8%	96.8%	100.0%	—
Increase/Decrease in Per Cent	.2%	.1%	(.2%)	.1%	.1%

shown at the bottom of the report provide figures which summarize the month's overhead activity.

The stress on overhead is placed on control by function rather than by natural expense. An example is the somewhat conspicuous absence of certain general and administrative expenses in the factory cost section. This has the effect of producing some distortion in the product cost but allows for greater control of overhead by centres of responsibility.

SELLING AND ADMINISTRATIVE EXPENSES

Selling and administrative expenses constitute approximately 12% and 7% of net sales respectively. As both of these expense groupings are principally fixed in nature, their control becomes relatively easy. Budgets are set at the beginning of each period, as in the case of factory overhead, and adjusted for seasonal fluctuations which again gives a realistic approach to the comparison of budgeted and actual amounts.

Selling expenses are subdivided into three principal sections—selling expenses, advertising expenses and distribution expenses. As these all fall into one general grouping, the expense accounts are set up on a natural basis and collected by function for purposes of analysis.

Administrative expenses also include general expenses as these are under the control of the administrative staff.

Because of the competitive nature of the product, the sales manager has been given complete authority and responsibility for all matters pertaining to customer service. These include responsibility for selling expenses, methods of product distribution and advertising. The budget for advertising is set in conjunction with the general manager and is considered a fixed expense. The sales manager also acts in an advisory capacity to the controller in the matter of credits and collections.

The control of general and administrative expenses is handled by the controller in conjunction with the general manager.

ANALYSIS OF EXPENSES

Budgets are prepared annually for the selling expenses by the three functions mentioned earlier. These also are in the form of flexible budgets so that both variable and semi-variable expenses can be compared on a realistic basis with actual results. A report is prepared monthly on a territorial basis for each of the three groupings. Selling expense covers advertising and distribution. The monthly report for the distribution function is illustrated in condensed form as Exhibit 5. This report shows expenses by accounts for each of the sales territories as well as expenses on a per 100 pounds of chips basis. Reports such as these, when compared month by month as well as against current budget, immediately show up trends and indicate the relative profitability of territories.

IMPORTANCE OF BUDGETS

Budgets form the corner stone for all forecasting of operations, co-ordinating of activities and controlling of expenses at Chips Inc.

At the beginning of the year, detailed budgets covering all phases of projected operations are prepared and assembled into a master budget. This is considered so important that all executives are held responsible for seeing that all budgeted objectives under their control are met. Any deviations from budget are thoroughly analyzed even if they be favorable variations such as sales increases or labor savings. The master budget co-ordinates all departments of the business.

Emphasis has been placed throughout this thesis on control of expenses by comparison with predetermined budgeted amounts, approved initially by the department heads responsible, and analysis of any variances encountered. This has been found to be the most effective method of securing the co-operation of the responsible personnel in the fields of cost control.

Maximum benefits to the firms are thus obtained by all employees either directly or indirectly following the budget plan set at the beginning of the period.

DEVELOPMENT OF BUDGETS

The controller, the works manager and the sales manager comprise a budget commitee under the co-ordination of the general manager which sets all budgets at the beginning of the period. The detail work of budget make-up is handled by the general and cost accounting departments under the direction of the controller. These departments meet with all department heads and together budget detailed amounts submitted to the budget committee for approval.

After approval has been given by the budget committee, the controller, with the aid of the accounting departments, prepares budgets for each phase of the operations and consolidates them into a master budget for submission to the general manager

and the board of directors. Copies of the detailed budgets are sent to each applicable department. Department heads throughout the organization are thus kept abreast of operations and are made both budget and cost-conscious.

Budget comparisons are used most extensively in the areas of financial reports, sales and profit estimates, selling, administrative and factory overhead expenses, and capital expenditures.

REPORTING

The relatively small size of Chips Inc. encourages much personal contact between all levels of management. The reporting of activities is therefore kept to the minimum consistent with sound control theory and as informal as possible which keeps the interest of non-accounting personnel at a high level. Despite this personal contact, it is considered of great importance to have all formal reporting follow the proper communication channels. This standardization of reporting keeps confusion to a minimum and ensures that all responsible personnel are kept properly informed.

The following sections give an illustrative list of reports issued to the various personnel on a routine basis.

REPORTS TO MINOR EXECUTIVES—(Foremen and Department Heads)

(1) Production Reports
(2) Force and Absenteeism Reports
(3) Material Usage Variance Reports (detailed by them)
(4) Labor and Overhead Variance Report

CHIPS INC. EXHIBIT 6

SUMMARY PROCESSING REPORT

PRODUCTION

Size	Pound Sales	Per Cent
5c. 48's	18,750	9.3
10c. 36's	95,625	47.3
25c. 12's	6,562	3.2
6 oz. 12's	9,000	4.5
10 oz. 6's	45,000	22.2
16 oz. 6's	9,000	4.5
5 lb. Bulk	4,000	2.0
10c. 24 B-B-Q	6,563	3.3
10 oz. 6's B-B-Q	7,500	3.7
Total	202,000	100.0
Add: Closing Inv.	12,000	
	214,000	
Less: Opening Inv.	14,000	
Pounds Processed	200,000	

POTATOES

Pounds Processed	816,327
Shrinkage, Rejects	83,673 lbs.
Potato Yield	24.5
Prices	
Purchase Average	$2.078 cwt.
Purchase Range	$1.95 - $2.11 cwt.
Consumption Actual	$2.261 cwt.

SHORTENING

Pounds Consumed	86,000
Disappearance	43.0%
Prices	
Purchase Average	$20.75 cwt.
Purchase Range	$19.75 - $21.05 cwt.
Consumption Actual	$20.00 cwt.

LABOR

Machine Efficiency:	Standard production for hours processed	207,500 lbs.
	Actual production	200,000 lbs.
	Machine Efficiency	96.4%
Labor Efficiency:	Labor hours per cwt. processed—(December)	.50
	Labor hours per cwt. processed—(cumulative)	.53

OVERHEAD

Overhead per Labor Hour	This month $ 3.007	Last month $ 3.065.
Overhead per Machine Hour	This month $18.000	Last month $18.225.

(5) Comparative Sales Report (by territories, previous years and class of trade)
(6) General Report (outlines highlights of month's operations in a general and interesting manner)

REPORTS TO MAJOR EXECUTIVES—(General Manager, Controller, Works Manager and Sales Manager)

(1) Financial Statements (see Exhibit 7)
(2) Force and Absenteeism Report
(3) Summary Material Usage and Price Variance Report
(4) Summary Labor and Overhead Variance Report
(5) Detailed Sales Reports
(6) Profit Plan Report (compares actual results of operations with master budget)
(7) Summary Processing Report (see Exhibit 6)

SPECIAL REPORTS

(1) Normal Profit Plan (a long-term study)
(2) Master Budget
(3) Profit/Volume Studies (see Exhibit 8)

EXHIBIT 7

CHIPS INC.

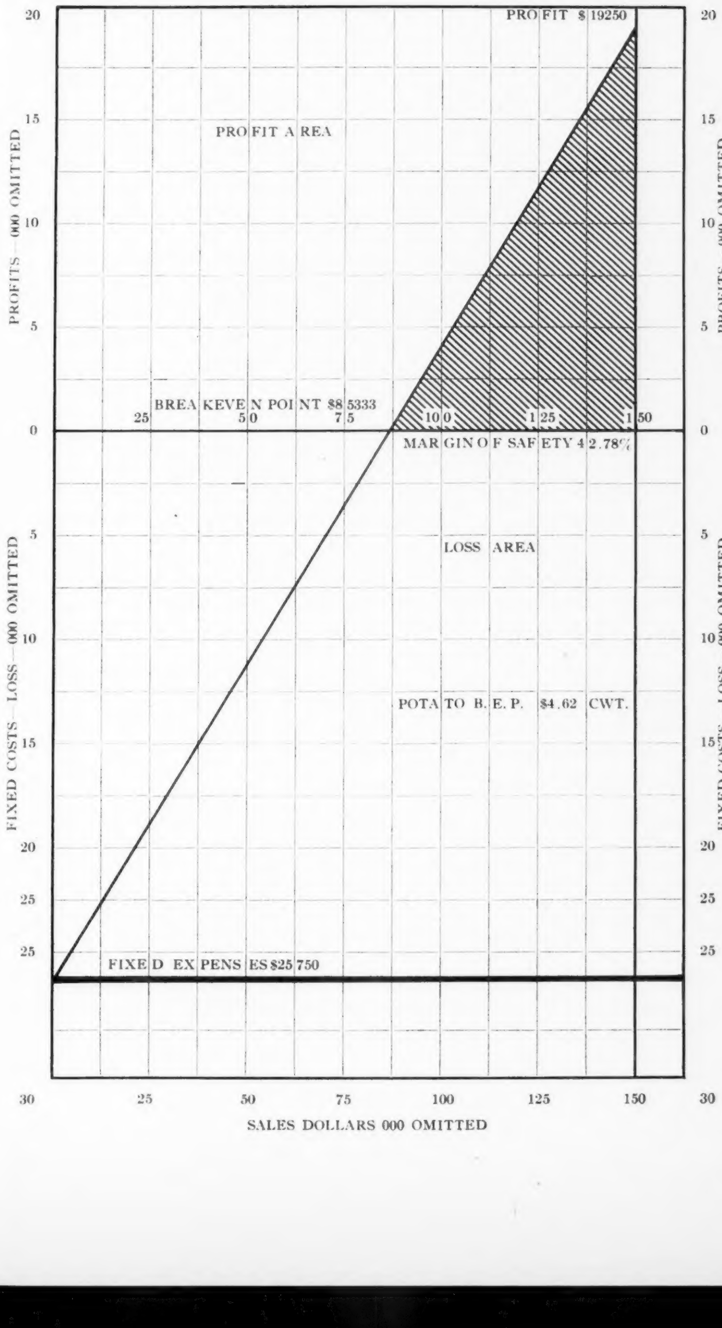
STATEMENT OF PROFIT AND LOSS

for the month ending December 31, 1959.

	MONTH—THIS YEAR		% OF NET SALES	MONTH—LAST YEAR		% OF NET SALES
	$	$	%	$	$	%
SALES	150,000	150,000	103.5	125,000	125,000	103.7
Less: Trade Disc.	4,200		2.9	4,000		3.3
Ret. Sales	800		.6	500		.4
	5,000	5,000	3.5	4,500	4,500	3.7
Net Sales		145,000	100.0		120,500	100.0
COST OF SALES						
MATERIALS:						
Raw Materials	42,420		29.3	35,000		29.0
Stores Materials	38,480		26.5	32,600		27.1
Sundry Supplies	1,600		1.1	1,200		1.0
Total Materials	82,500		56.9	68,800		57.1
DIRECT LABOR:						
Processing	1,400		1.0	1,215		1.0
Packaging	6,600		4.5	5,735		4.8
Total Direct Lab.	8,000		5.5	6,950		5.8
MANUFACTURING EXP.	8,500		5.9	7,550		6.2
Less: Promotional Prod. Consumed	(800)		(.6)	(300)		(.2)
Total Manf. Exp.	7,700		5.3	7,250		6.0
COST OF SALES	98,200	98,200	67.7	83,000	83,000	68.9
GROSS PROFIT		46,800	32.3		37,500	31.1
SELLING EXPENSES	17,400		12.0	14,000		11.6
ADMIN. EXPENSES	10,150		7.0	8,000		6.7
Total S. & A. Exp.	27,550	27,550	19.0	22,000	22,000	18.3
PROFIT BEFORE TAXES		19,250	13.3		15,500	12.8
PROV. FOR TAXES		9,800	6.8		7,300	6.0
NET PROFIT		9,450	6.5		8,200	6.8

CHIPS INC. Exhibit 8

PROFIT/VOLUME RELATIONSHIP



(4) Special Variance Reports (principle of exceptions)

Special reports encompass a wide field of which the above are only the few recurring most frequently.

CONCLUSION

The intention of this thesis has been to describe a system adaptable to chip manufacturers of any size. In fact, with minor changes, this system could be adapted to many small process-type industries. Because of this broad purpose, certain sections have been described in outline only, without too much attention being paid to the detail practice. Small "chippers" could use all or part of the statistical procedures outlined to obtain relatively inexpensive cost control. Larger "chippers" might adapt and incorporate the statistical procedures into their books of account and develop an integrated standard cost system.

Whichever procedure is followed, adequate cost control over all phases of the business can be obtained.

For further reading

A COST SYSTEM FOR A FOOD-PROCESSING COMPANY, by Louis J. Smitten, *The Controller, Aug. 1956.*

OLD TIMERS GET A NEW LEASE ON LIFE by N/A

Factory, January, 1961

Despite a retirement program as good as any in industry, Royal McBee Corporation heard gripes from many old timers . . . Money wasn't everything. They wanted more out of their twilight years than a comfortable rocker and a pension cheque. They wanted to produce—to get back into harness.

Royal McBee's Hartford, Conn., plant has given them the means to do just that. The company has set up a typewriter repair business and handed it over to interested retirees. Though keeping completely independent of the new company, Royal McBee is at present providing logistical support, training facilities, advisory personnel, and space leases at a token fee. But only training is to be a permanent service.

As of this writing, Senior Typewriter Repair Company is in the process of incorporation. A stock arrangement is being worked out so retirees will receive shares on the basis of the number of hours each man spends on the job.

TOPICAL comments

LOOKING AHEAD

Higher education by television is catching on. Three Canadian universities are presently giving TV credit courses in Russian, French literature, biology and economics and seven others are developing plans for the medium. Among subjects that will be presented in future are: geography, philosophy, psychology, geology, mathematics, engineering and political economy. *(Can. Bus., Feb. 1961.)*

Smokers will be the target for a stepped-up cigarette sales campaign this year. Per capita consumption dropped from 2,000 cigarettes in 1959 to 1,900 last year and with more brands moving in, competition will be keener than ever. *(FP, Jan. 21/61.)*

"Talking" cheques have been developed for use in banks. At the first touch of ink eradicator or tampering, the specially treated paper sprouts the word "void" hundreds of times. *(Precis)*

In the labor-management field, efforts may soon be made to replace collective bargaining with the joint benefit conference-type of approach. Many employers are lukewarm about the new idea as they feel it will lead to loss of the bargaining initiative they have gained in recent years. *(Factory, Feb. 1961.)*

Mining from the sea is a distinct possibility for the future. Scientists estimate that at least $500,000 worth of minerals are contained in each square mile of ocean floor.

Sea water is loaded with minerals and chemicals including magnesium, sulphur, sodium, calcium, potassium, bromine, chlorine and dissolved salts of gold, silver, aluminum, radium, nickel, iron, chromium and uranium.

Many scientists believe mining from the sea will be economically feasible. For example, a University of California professor predicts that manganese can be mined from the ocean floor nodules at a cost of $3 to $5 a ton. *(Steel)*

OF GENERAL INTEREST

Canadians marry younger on the average than many other peoples in the world. During 1957 and 1958, 30% of Canadian brides were under 20 years of age and 41% were between 20 and 24. Of the grooms, 6% were under 21 years and 45% between 21 and 24. This ranks Canada high in the early marriages department, fourth only to Mexico, Jugoslavia and South Africa. *(The Economist, Dec. 24/60.)*

The average business letter in 1960 cost $1.83, a 13-cent increase since 1957. *(Am. Bus.)*

Mobile home residents in the U.S. are increasing. If all the people living in mobile homes were gathered together, they would make up the third largest city in the United States with 3.5 million people. The sale of homes on wheels has jumped from $160,000 ten years ago to $715 million in 1959.

Inadequate vision for their jobs may be suffered by 30 to 60% of American workers, reports a comprehensive study. Fortunately, nine out of ten visual defects uncovered prove correctible. One company estimates that its program of testing and correcting eyesight has saved it $6,000 monthly—in terms of spoilage, man-hours and customer satisfaction. *(Personnel, Jan.-Feb. 1961.)*

The automatic vending machine business is coming into its own. Not only do present-day coin-fed machines vend anything from ice cubes to phonograph records but they make change and can tell a good $5.00 bill from a phony single. *(Cont., Feb. 1961.)*

Latest wrinkle in the industry is coin-operated do-it-yourself drycleaning which is expected to go into operation in Canada in the near future. The coin in the slot does not, of course, include pressing and finishing nor can clothes be pre-spotted for difficult stains. *(FP, Jan. 21/61.)*

ON THE PERSONAL SIDE

The typical American family now spends $294 a year for personal health services, or 42% more than it spent five years earlier. Less than half of the increase in health spending during the five-year period was due to increased costs of health care, while somewhat more than half was due to increased use of services. *(Precis)*

Amateur astronomy is claiming more fans as the space age gets into orbit. An inexpensive hobby, it needs only a clear night and the unaided eye. More than 100 growing amateur clubs have already sprung up in North American cities. *(Bus. Week, Feb. 18/61.)*

Two-car families in Canada made up 7.4% of the mobilized population in 1960. The total percentage of households with cars was 66.6%. *(DBS, Feb. 3/61.)*

The rash of airplane crashes recently might make travellers think twice about taking a plane. Actually, during 1959, only one fatal accident occurred out of every 350,000 flights. Statistically, this adds up to the fact that you are about 20 times safer in a commercial airliner than you are in your own car. *(Bus. Week, Feb. 4/61.)*

Creativity does not cease with age geriatric studies show. Some cases in point: Michelangelo produced masterpieces at 89; Voltaire wrote some of his greatest works between 60 and 84; Goethe completed *Faust* in his 80's; Frank Lloyd Wright was still working a 12-hour day at 89; and Toscanini conducted when 87 and made recordings until his death. *(Sat. Night, Feb. 18/61.)*

S.I.C.A. News

THE SOCIETY OF INDUSTRIAL & COST ACCOUNTANTS OF CANADA

INCORPORATED 1920

THE ANNUAL MID-YEAR MEETINGS

The annual mid-year meetings of the Board of Directors and the Co-ordinating Educational Committee took place at the Royal Connaught Hotel in Hamilton on February 17th and 18th. The meetings were attended by 53 directors and 25 members of the Educational Committee, representing nine of the ten provinces.

One of the most important steps taken by the Co-ordinating Educational Committee was to approve measures designed to increase the efficiency of examination administration and procedures. The recommendation was adopted to appoint a chairman and one sponsor for each examination to the Examination Board, a total of ten in all. In addition, the administrator of the R.I.A. correspondence course from McMaster University will be a member. Observers will be invited from those universities where R.I.A. courses are conducted.

The function of each sponsoring member will be to review the examination papers prepared by the Society staff and to recommend from these provisional 200-mark papers a paper of 100 marks. The sponsoring member will also serve as adviser to the staff on all matters concerning the examination for which he is responsible. This, in effect, gives the staff ten advisers to aid in the preparation of examinations and to be jointly responsible with the staff for the final composition of the examination papers.

The Co-ordinating Educational Committee also approved in principle a uniform schedule for preparation, submission and central grading of theses. Under this proposal, all theses will be submitted at the same time on a national basis. This parallels the organization now in use for examinations and will enable thesis results to be announced simultaneously across Canada.

The most significant matter before the Board of Directors at its meeting was the comprehensive report of the Graduate Studies Committee on the proposed post-graduate course in administrative accounting. The new course has been under study by the Committee for the past two years and has as its stated objective:

> "To provide opportunity of relating advanced learning with experience and previous training in the field of accountancy. It should serve to advance the knowledge of those who possess acceptable accounting qualifications to embrace those areas of studies that will give a new understanding of the planning and control function of business in the broadest sense."

This is interpreted by the Committee to mean imparting knowledge of trends and techniques which will enhance the service function of accounting in management. It also is intended to help the accountant adjust himself to an environment in which the overall viewpoint must replace the narrow technical approach, and in which he must deal with the intangibles, uncertainties and the risks of decision making.

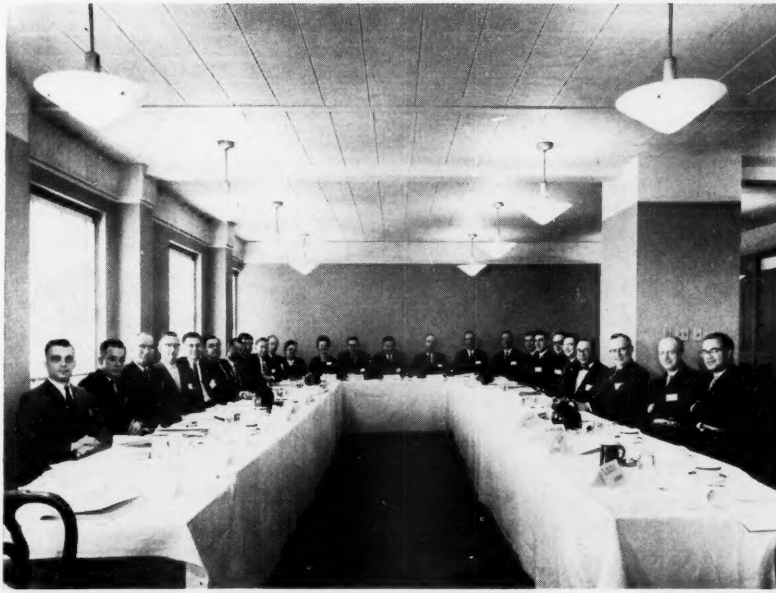
The Committee reported that its proposals for the course had been put to a survey of a selected group of top management executives for their reactions. In doing this, the Committee had two questions in mind—is there a need for such a course and, if so, would the proposed course make a valuable contribution towards meeting that need? Personal interviews were conducted in 35 firms representing a cross-section of industry, manufacturing and non-manufacturing, and of various sizes and types. The survey revealed that, in the opinion of those interviewed, there was a definite need for such a program and the plan submitted would make a valuable contribution to that need. However, those interviewed offered a number of constructive suggestions for the consideration of the Committee. The survey also indicated that there would be continuing support for the program if the objectives outlined are attained.

The Board made a very critical appraisal of the Committee's report and concluded that its recommendations should be approved in principle and implemented at the discretion of the executive.

The adoption of a graduate studies program would be a major undertaking for the Society but one that should result in more effective use of the accountant's basic skills in business management.

More complete information about the graduate studies program will appear in **Cost and Management** as the program develops.

THE BOARD OF DIRECTORS of the Society congregating in Hamilton on February 17th and 18th for the annual mid-year meetings pose cheerfully for the camera. Representatives of nine provinces attended the meetings.



MEMBERS OF THE CO-ORDINATING EDUCATION COMMITTEE meeting with staff members during the annual mid-year meetings take a break from the proceedings for this shot.

CONFERENCES AND SEMINARS

Busy Spring Program Coming Up

All members have by now received a copy of the seminar schedule for 1961. Initial response to the program mapped out has been gratifying, with a fair number of registrations already in. As in other years, a number of congratulatory letters have been received from non-members about the Executive Development program, in which they ask for additional copies of the booklet for distribution to others in their firms.

Two seminars are scheduled for Eastern Canada in the spring. On April 12th to 14th at the Guild Inn, Scarborough, Ontario, Professor André Bisson of Laval University and D. M. Wilson, Controller of the Canadian Chemical Company, will be the moderators for a presentation on "Direct Costing." On May 3rd to 5th at the Seigniory Club, Montebello, Quebec, Frank Willcox of Price, Waterhouse and Company, Montreal, and D. G. Scott, Vice-President, Administration and Finance, Eldorado Mining and Refining Limited, will be moderators for a seminar on "Organization and Administration of the Accounting Function." During the latter program, E. W. Kierans, President of the Montreal and Canadian Stock Exchanges, and W. R. Corner, Co-ordinator, Data Processing, Canadian National Railways, will be special guest speakers.

The 40th Cost and Management program is shaping up nicely and members have by now received some "teaser" information by mail. When present plans are firmed up, full details will be sent out in another mailing. This should be the biggest and best National Conference ever, so start planning now to attend.

CHAPTERS AND MEMBERSHIP

Kent County Panel on The Business Outlook for 1961

Kent County Chapter received excellent news coverage of its panel on "The Business Outlook for 1961." The panel was moderated by R. Glyn Nelles, Comptroller of H. J. Heinz Co. of Canada Ltd. and Treasurer of the Ontario Society. The panel, made up of experts on business, government, agriculture, and the local municipal administration, reviewed the overall business climate. Their findings and forecasts as reported in several Ontario newspapers, indicate the keen interest of business and local governments in the future economic picture.

With a certain tone of reservation, the panel agreed that 1961 could be a successful year for Canada.

Some of the economic indicators that point to a banner year were enumerated by M. J. Brownlie, Assistant Professor at Assumption University. He cited a growing population and a rising living standard, with a healthy European export picture as factors that point to an active business climate. He attributed part to the unemployment problem to technological changes, and felt that the level of employment is over-

KENT COUNTY CHAPTER HOLDS PANEL DISCUSSION — Comparing notes are participants in the Chapter's panel discussion on "The Business Outlook for 1961" held at the William Pitt Hotel, Chatham in January. From left (back row) are: Kenneth A. Standing, Secretary-Manager of the Ontario Soybean Growers' Marketing Board; Stewart Robertson of Toronto, Financial Analyst and Statistician with James Richardson and Sons; J. M. Brownlie, Assistant Professor, School of Business Administration, Essex College, Assumption University of Windsor; (seated) Mayor Garnet R. Newskirk; and R. G. Nelles, of Leamington, Comptroller of H. J. Heinz Co., Leamington, Chairman.

emphasized as an indicator of economic health. Professor Brownlie forecast an annual G.N.P. of 38.5 billions by the end of 1961, but added that a sudden change in the confidence of the population as a whole could make a marked difference in the national production.

Financial analyst and statistician Stewart Robertson of James Richardson and Sons Company, Toronto, predicted a good year but warned that Canadian business would have to take stock of and discipline itself in these areas: stiff competition, both domestic and foreign; cost control at all levels; integration and amalgamation of certain industrial concerns to aid in controlling costs; creation of new products and improvement in present products; and penetration of new markets, foreign and domestic.

Mayor Garnet R. Newkirk of Chatham said that finance is the major problem facing municipalities in 1961. "If it were not for government subsidies, municipalities would become bankrupt", he said. He felt that strenuous efforts must be made to reallocate taxes and tax fields to cope with urbanization while improvement and construction must continue.

The only real trouble spot forecast was in the farm picture, a weighty problem in a market gardening area that is one of Ontario's richest. Of particular concern locally have been technological changes and the inroads made by imports from foreign agricultural and industrial markets. "Farmers have increased their efficiency to a remarkable degree to meet the problems of higher costs", panelist Kenneth Standing, Secretary-Manager of the Ontario Soybean Producers' Marketing Board, told the gathering, but he emphasized that greater strengthening is needed in all fields.

Vancouver Chapter Incorporates Its Own Business Enterprise

At its February meeting the Vancouver Chapter established a most unique precedent, incorporating all of its members as shareholders in the formation of the "Sunbeam Hat Company." After the organization meeting last month, they plan an annual meeting in March, with an "extraordinary" general meeting in April when the "company" is expected to cease operations.

This is all part of a case study being presented by the chapter in three successive meetings. All relevant data, financial statements, etc., are being mailed in advance of the meetings to each chapter member as a shareholder of the company.

This is an unusual experiment that should be well worth watching and further details will be reported as the series progresses.

Oshawa Still Leads Inter-Chapter Competition

With less than two months to go in the Inter-Chapter Competition, Oshawa District Chapter still holds its commanding lead with 2,708 points. Winnipeg is in second spot at 2,196, and Moncton with 1,988 points has now edged out the Grand River Chapter for third place.

The interesting and encouraging thing about the runners-up is that neither chapter has ever been in a strong contending position before. The explanation in each case lies in the current vitality of these chapters in expanding their membership, both general and student. In addition, the Manitoba and New Brunswick provincial education committees have given strong support to their chapters this year in developing the educational program.

The Oshawa District Chapter now has 1,000 out of a possible 1,200 points for submission of manuscripts. Chapters which have not submitted many manuscripts might note that this is now the major source of points left in this year's competition. From 100 to 200 points, depending upon the size of the chapter, are granted for each manuscript suitable for publication in **Cost and Management.**

PUBLICATIONS AND TECHNICAL SERVICES

As new books come on the market, the publishers send S.I.C.A. a copy for review purposes. The books received cover accounting, finance, and other areas of the business world.

Most of the library volumes have been obtained in this way through the generosity of the publishers. Consequently, the excellent selection of current business reading available to the members has been obtained at a very low cost.

We have on hand several copies of new books recently released by the publishers. If you are interested in a particular field and would like to write a review for **Cost and Management**, please drop the librarian a line. When a book on your subject becomes available, she will be happy to send it along to you for review.

STUDENTS AND COURSES

DATE OF INDUSTRIAL LEGISLATION EXAMINATION CHANGED

Students are asked to note that the Industrial Legislation examination will be written on May 5, 1961 rather than on April 26 as originally announced.

A Study Guide For Accounting Students

The following study guide appears in an article entitled "A Motivation Program to Increase the Effectiveness of Accounting Courses" by Robert G. Stevens, published in **The Accounting Review** of October, 1956. R.I.A. students may find many of the suggestions helpful.

Check your study habits against these suggestions. There is no substitute for HARD WORK or for a DESIRE TO LEARN in studying accounting, but most of us could use our study time and our classroom periods more efficiently. There are some techniques that enable us to show better our ability on exams and receive better grades. See if you can use these suggestions to get maximum results for your study efforts.

Reading The Textbook

1. Studying accounting is not like reading fiction or even like studying history, mathematics or economics.
   (a) Each assignment in many accounting courses builds on previous assignments. If you do half-hearted work in Chapter I, you may have difficulty in Chapter II and be lost in Chapter III.
   (b) Accounting books are condensed. Almost every sentence is important. Look over the chapter for content and then read carefully.
2. READ to understand "why".
   (a) This is a technical subject, it is logical, it requires reasoning.
   (b) Strive to be able to say, "I understand why they do that." If you can understand "why" in accounting, there is very little to memorize.
   (c) Try to explain each new topic in your own words. Getting the new ideas into your own words is better than being able to quote the book.
   (d) Be critical. Ask your teacher for the reasons behind accounting methods that you do not understand.

3. Work PROBLEMS to understand "how."
   (a) You may be able to "understand why they do that," but you must be able to do it yourself as well as understand. This is a do-it-yourself course.
   (b) To be sure that you understand "how" as well as "why," work problems which illustrate the reading material in each chapter.
4. REMEMBER "why" and "how."
   (a) Do not just keep up—consolidate—review as you go.
      (1) Go back to previous chapters and bring yourself up-to-date. See how this chapter builds on the last one.
      (2) If possible, rework one problem each week from some previous chapter. Rework problems that were difficult for you.
   (b) Never wait until examination time to review your accounting. The review-as-you-go plan produces better results. It does not take as long, and saves that last minute worry and sacrifice of other courses that goes with cramming.
5. Relate the things we talk about in accounting to things that you already know—places you have worked—your father's business—other courses. Try to see how this might help you do what you want to do in the future. See if you can use it right now.
6. If there is something you do not understand, prepare specific questions to ask your instructor. PIN-POINT THE THING THAT YOU DO NOT UNDERSTAND. (Some students keep up a notebook of points with which they have had difficulty.)

Working Problems

1. (R T P) Read the problem. Read the instructions. Scan the problem to see what is ahead of you.
2. Work the problems without "page flipping" back to the chapter.
   (a) When in doubt look back at the chapter, BUT not until you have tried to do the transaction on your own. This indicates that you either do not understand or do not remember the chapter material. You are not prepared for an examination.
   (b) The "page flipping" method is guaranteed to waste a maximum of your time and to produce a minimum of results.
3. Be neat and orderly. Sloppy calculations, messy papers, and general carelessness cause most of our errors in working accounting problems.
4. Keep up with your class.
   (a) Check your problem against the solution presented in class.
   (b) Find your mistakes.
   (c) Be sure you understand the correct solution.
5. Note the part of the problem with which you have difficulty and ask questions during the classroom session. (Or from your correspondence marker.)

Preparing For Examinations

1. Be specific in your study; concentrate on the things which seem to be most important. (Some students make up an exam of their own.)
   (a) Note items that instructor emphasizes in class.
   (b) Determine topics for which most problems were assigned.
   (c) Daily quizzes and hour exams often have a close resemblance to each other.
   (d) Scan problems that were not assigned for problems that could be used on an examination.
   (e) Read questions at the end of the chapters for good test questions.
2. Do not stop with just "getting the idea." Be sure that you can work problems without the aid of the book.
3. Every exam has an element of speed. Have your "hows" and "whys" right at your finger tips. If you are slow, you probably need more study.
4. Students are not parrots. On a good exam you should be expected to give back something more than was in the textbook. A good exam should not be a carbon copy of a homework problem. It will probably approach the material covered from some different angle to test your ability to reason and understand rather than your ability to memorize.

5. When taking exams many points are lost because the student does not READ THE PROBLEM, is not neat and orderly (has poor form and makes errors in addition), or does not show calculations.
6. Examinations need not be a source of worry. It is seldom that conscientious effort is not rewarded.

Exam Books Available

Uniform Examination Question and Solution Booklets for 1960 are now available from your Provincial Registrar. They may be purchased for $1.00 per copy.

ADVANCED COST ACCOUNTING

PAPER II

QUESTION 3 (20 marks)

The Scotia Manufacturing Company is engaged in a continuous process manufacturing operation. The initial work-in-process inventory is valued on an average method. Part of the Cost of Production Report for the month of March 1959 shows the following:

	DEPARTMENT II	DEPARTMENT III
Cost of Work transferred into Department during March	$19,000.	?
Work-in-Process, March 1:		
Cost of work in Department I	2,000.	—0—
Material Cost in Dept. II	1,675.	—0—
Labor Cost in Dept. II	1,150.	—0—
Manufacturing Overhead in Dept. II	360.	—0—
Costs for the Month of March:		
Material Costs	6,200.	$11,500.
Labor Costs	3,500.	4,200.
Manufacturing Overhead Costs	1,500.	2,100.

Production statistics for this report show:

Department II.	In process, March 1	1,000 units
	Received from Department I during March	20,000 units
	Materials added in Dept. II during March increased the volume of production	5,250 units
During March, the production in Department II was:		
	Units completed and transferred to Dept. III	18,000 units
	Units completed and still in Dept. II	4,250 units
	Units lost or spoiled in production	1,000 units
	Unfinished units in Dept. II were 100% complete as to materials, 1/3 complete as to labor and manufacturing overhead costs	?
Department III.	Materials added increased the volume of production	9,000 units
During March, the production in Department III indicated:		
	Units completed and sent to stockroom	23,000 units
	Unfinished units, on which all the material had been applied, but only 1/3 the labor and overhead	3,000 units
	Unaccounted units in this department were assumed to have been lost or spoiled.	

REQUIRED:

From this information complete the following statements: Where unit costs are required, the computations should be correct to the nearest **third decimal place**. Present computations properly arranged for easy reference on supplementary records or sheets:

1. **Average unit cost** at which the work was transferred from Dept. I $ ....
2. The **total unit cost for work done in Department II only** ....
3. The **cumulative unit cost** for Departments I and II ....
4. The work-in-process in Department II, March 31, was valued at ....
5. The work-in-process in Department III, March 31, was valued at ....
6. The cost of work transferred to Dept. III during March was ....
7. The total cost of finished goods transferred from Dept. III during March ....
8. The number of units uncompleted in Dept. II, March 31, was .... units
9. The number of units transferred to Dept. III during March was .... units
10. The number of units lost or unaccounted for in Dept. III for the month of March was .... units

ADVANCED COST ACCOUNTING — PAPER II — SOLUTION

SOLUTION 3

1. Average unit cost for work done in Department I.

$$\frac{\$19{,}000 + 2{,}000}{20{,}000 + 1{,}000} = \$\ 1.000$$

2. Total unit cost for work done in Department II only.

$$\text{Material}\ \frac{\$1{,}675 + 6{,}200}{18{,}000 + 4{,}250 + 3{,}000} = \$\ 0.312$$

(1,000 + 20,000 + 5,250 − 18,000 − 4,250 − 1,000 = 3,000)

Labor and overhead

$$\frac{1{,}150 + 360 + 3{,}500 + 1{,}500}{18{,}000 + 4{,}250 + \frac{1}{3} \times 3{,}000} = \$\ 0.280$$

$ 0.592

3. Cumulative unit cost for Department I and Department II.

$$\text{Dept. I}\ \frac{\$19{,}000 + 2{,}000}{20{,}000 + 5{,}250} = \$\ 0.832$$

Dept. II (from part 2) 0.592

$ 1.424

4. Work-in-process in Department II, March 31, valued at:

Dept. I (4,250 + 3,000) × .832	=	$ 6,032.000
Dept. II (Material (4,250 + 3,000) × .312	=	2,262.000
Labor and overhead (4,250 + 1,000) × .280	=	1,470.000
		$ 9,764.000

5. Work-in-process in Department III, March 31, valued at:

$$\text{Depts. I and II}\quad 3{,}000 \times \frac{18{,}000 \times \$1.424}{23{,}000 + 3{,}000} = \$\ 2{,}957.400$$

$$\text{Dept. III Material}\quad 3{,}000 \times \frac{11{,}500}{23{,}000 + 3{,}000} = 1{,}326.900$$

Labor and overhead

$$\tfrac{1}{3} \times 3{,}000 \times \frac{4{,}200 + 2{,}100}{23{,}000 + \tfrac{1}{3} \times 3{,}000} = \$\ 262{,}500$$

$$\$\ 4{,}546.800$$

6. Cost of work transferred to Department III during March:
   18,000 × $1.424 (from part 3) $25,632.000

7. Total cost of finished goods transferred from Department III during March:

$$\text{Depts. I and II} \quad \frac{18{,}000 \times \$1.424}{23{,}000 + 3{,}000} = \$\ 0.986$$

$$\text{Dept. III Material} \quad \frac{11{,}500}{23{,}000 + 3{,}000} = 0.442$$

Labor and overhead

$$\frac{4{,}200 + 2{,}100}{23{,}000 + \tfrac{1}{3} \times 3{,}000} = 0.263$$

$$\$\ 1.691$$

$$23{,}000 \times \$1.691 = \$\ 38{,}893$$

8. Number of units uncompleted in Department II, at March 31:
   1,000 + 20,000 + 5,250 − 18,000 − 4,250 − 1,000 = 3,000

9. Number of units transferred to Dept. III during March:
   Given 18,000

10. Number of units lost or unaccounted for in Department III for the month of March:
    18,000 + 9,000 − 23,000 − 3,000 = 1,000

PERSONALS

K. G. NICHOLS, R.I.A., has been appointed a Director and Assistant Secretary-Treasurer of Commonwealth Construction Co. Ltd., Vancouver. Mr. Nichols is Chairman of the Vancouver Chapter.

PETER NORTON, A.C.I.S., R.I.A., of the Vancouver Chapter has been appointed a Director and Secretary-Treasurer of Gearmatic Company Ltd., North Surrey, B.C.

JAMES D. FLEMING, C.A., has been appointed Assistant Controller of Dow Brewery Ltd., Montreal. Mr. Fleming is a General Member of the Montreal Chapter.

CHARLES H. ROBITAILLE, R.I.A., of the Quebec Chapter, has been appointed President of the Better Business Bureau of Quebec and Vice-President of Centre Medico Social pour Enfants Inc.

W. G. B. KING, R.I.A. of the Grand River Chapter, has been appointed Operations Manager of the Deilcraft Division of Dominion Electrohome Industries Ltd., Kitchener, Ont.

I. E. LESNIK, R.I.A., has been appointed Comptroller of Wisconsin Electric Products Ltd., Toronto. Mr. Lesnik was Vice Chairman of the Bay of Quinte Chapter.

N. C. JEFFERS, R.I.A., of the Peterborough Chapter has been appointed Plant Controller of General Foods, Limited, Cobourg, Ontario.

G. D. McKINNON, R.I.A., has been appointed Controller of Colonial Homes Ltd., Toronto. Mr. McKinnon was Vice Chairman of the Lakehead Chapter.

E. A. ASH, formerly of St. John's and Moncton, has been transferred to London, Ontario as Comptroller, London Area, Canadian National Railways.